



BRICKFIELD

Education Labs

Part 2. Web Accessibility

What problems face our personas with Web?



Lee, online shopper with color blindness (red and green)



Ilya, senior staff member who is blind

Uses screen reader and mobile phone to access the web.



Preeti, middle school student with attention deficit hyperactivity disorder and dyslexia

Uses text-to-speech software

What problems face our personas with Web?

-1



Lee, online shopper with color blindness (red and green)

- Bad color contrast of text and images.
- Color alone is used to indicate required fields and sale prices.
- Difficult to make product choices when color swatches are not labelled with the name of the color.

What problems face our personas with Web?

-2



Ilya, senior staff member who is blind
Uses screen reader and mobile phone to access
the web.

- Web sites not properly coded.
- No alt text descriptions on images.
- No navigation cues make site un navigable.
- Bad structured content, not able to move to another area, not able to understand structure.

What problems face our personas with Web? – 3



Preety, middle school student with attention deficit hyperactivity disorder and dyslexia.

Uses text-to-speech software

- Bad use of graphics, difficult to focus on the sections and content to read.
- Sites with lots of advertisements and moving content are very distracting.
- Problems with online content when navigation is not evident.
- Complicated language.
- Complex layout.

Remember: Main items to work in accessibility (I)

- **Structure:** use headings and styles to structure your document.
- **Colour and contrast:** Consider the colours you use and the contrast between text and background.
- **Use of images (and Media):** Use alternative (alt) text on your images. Provide captions, subtitles and transcripts of multimedia elements.

Remember: Main items to work in accessibility (II)

- **Links (hyperlinks):** Describe your link, never use click here.
- **Plain English:** use clear uncomplicated language with no jargon.
- **Table structure:** use simple tables without merged or split cells.

The basic six things to consider when creating accessible information

Structure (heading styles)



Colour & contrast



Use of images +Media



Links (hyperlinks)



Plain English



Table structure



S

C

U

L

P

T

Use headings and styles to structure your document

Consider the colours you use and the contrast between text and background

Use alternative (alt) text on your images

Describe your link, never use click here

Use clear uncomplicated language with no jargon

Use simple tables without merged or split cells

www.worcestershire.gov.uk/sculpt

Creating Web Content



Content editors

- WYSIWYG editor (like Word)
- TinyMCE
- Atto
- CKEditor
- Plone
- Wordpress

Starting rules

- Learn interface – don't be afraid of them!
- Understand key aspects
 - Structure
 - Text
 - Media
 - Links

LinkedIn Article



LinkedIn Article editor features

- Credit and Caption for Header Image
- Text editor (like Word)
- Autosave
- Alt Text Prompts when adding Images
- Spell and grammar checking
- Word Count

Header Image

Publishing menu ▾

Normal ▾

B *I* U

☰ ☰

🔊 ✎ Saved

Publish



Headline

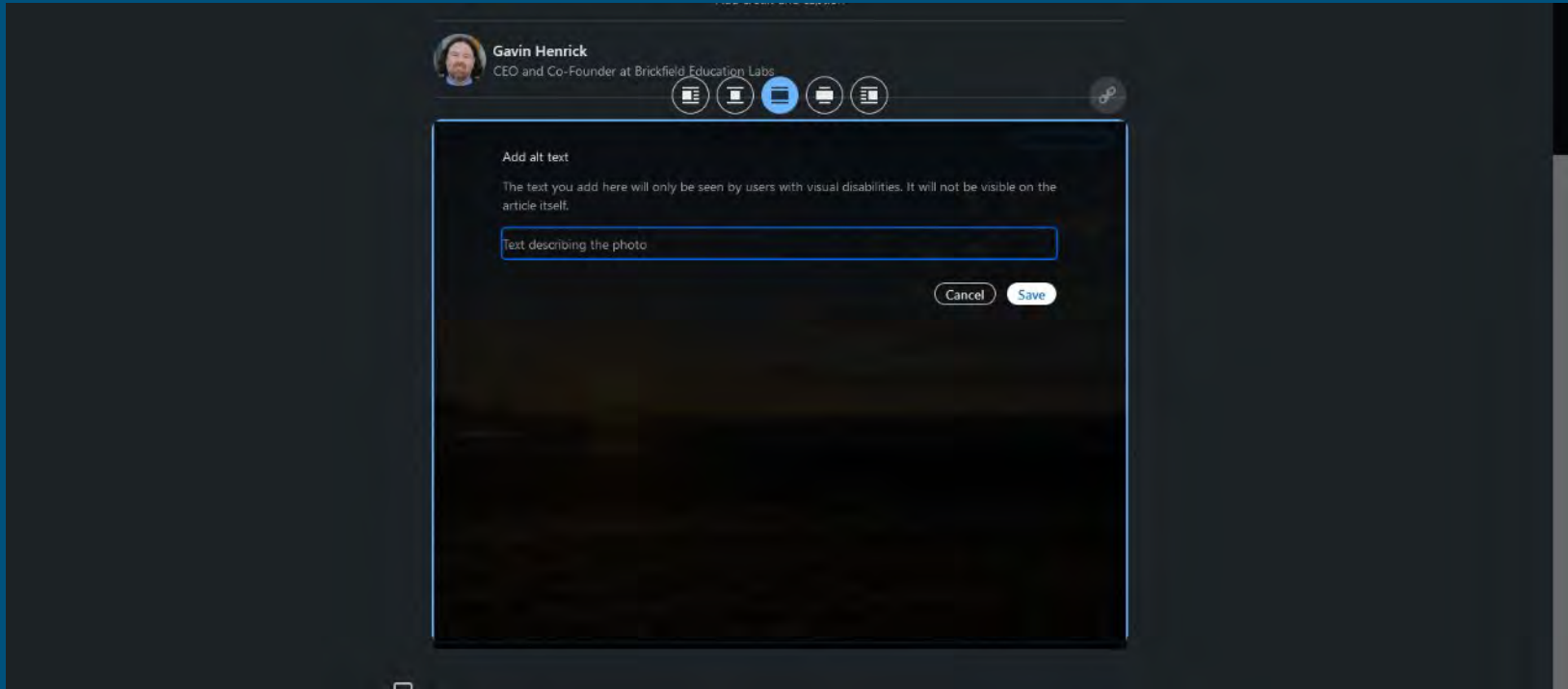


Add credit and caption

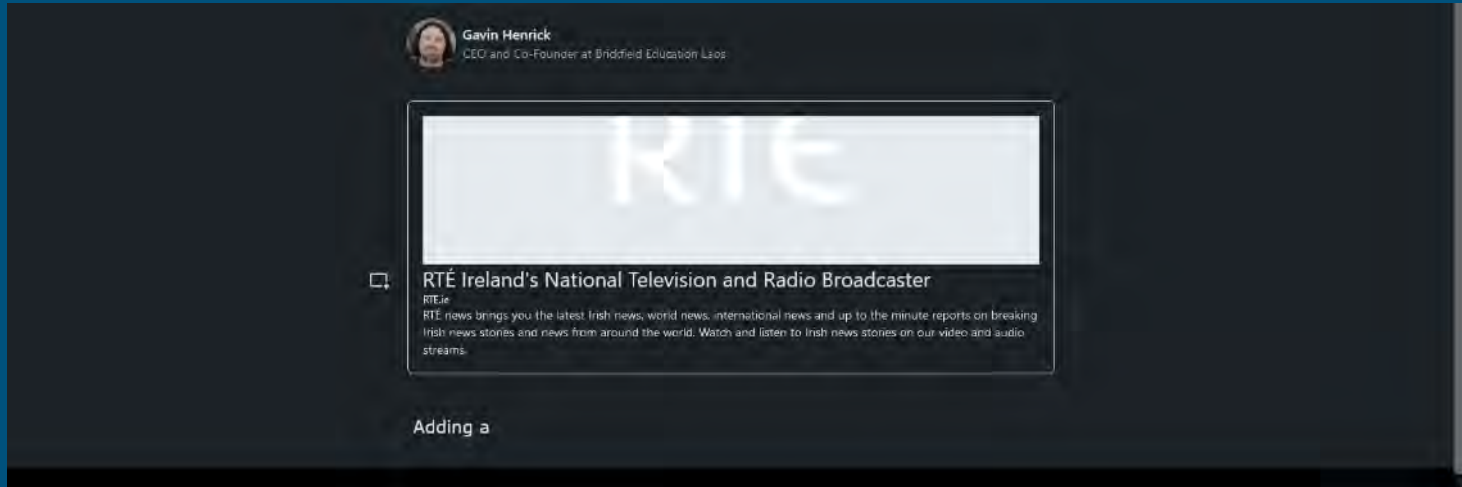


Gavin Henrick

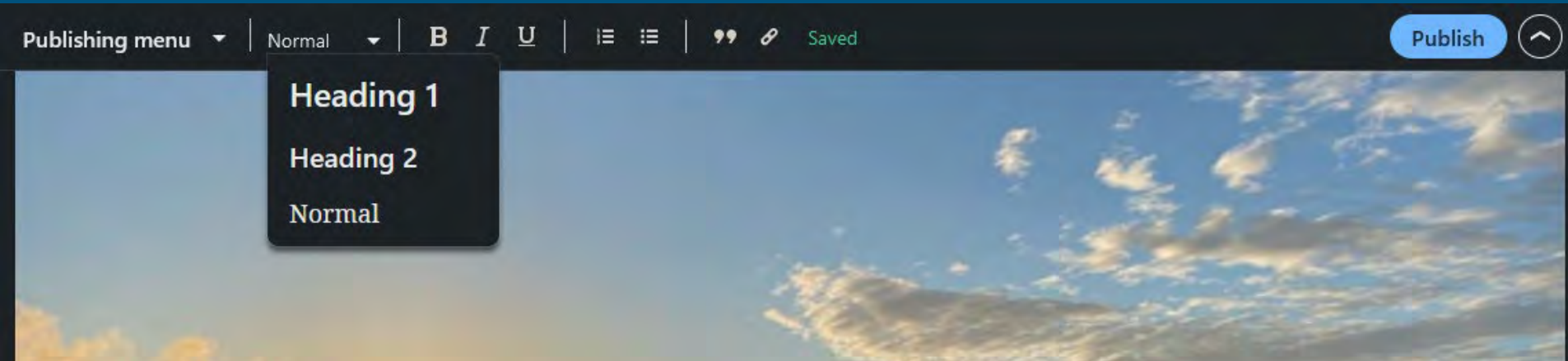
Image Alt Text



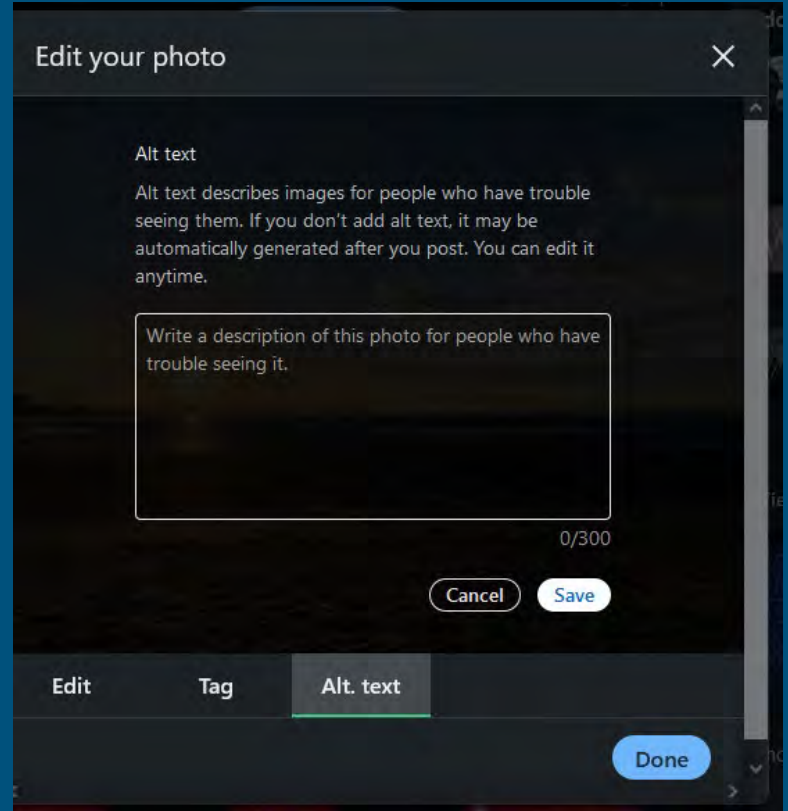
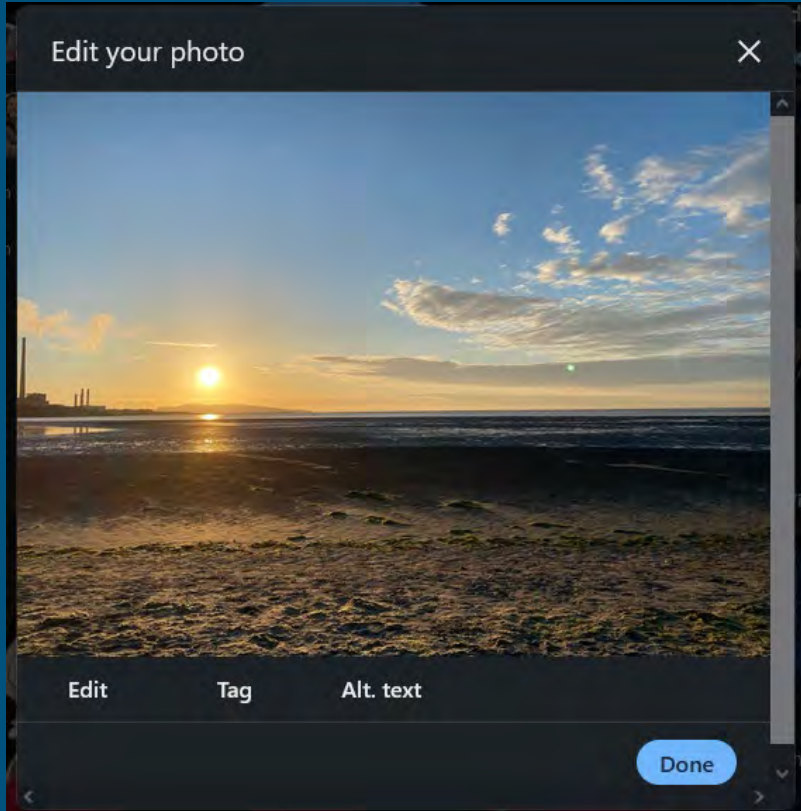
Adding a Link - Preview



LinkedIn - Headings



Add Post - Image



CKEditor



CKEditor editor features

- Text editor (like Word)
- Autoformatting
- Autosave
- Prompts when adding media
- Spell and grammar checking
- Word Count

CK Editor

Heading 1 **B** *I* @ :: !: ~ ≡ ≡ 🖼️ “” 📅 📺 ↶ ↷


The three greatest things you learn from traveling

Like all the great things on earth traveling teaches us by example. Here are some of the most precious lessons I've learned over the years of traveling.


Appreciation of diversity

Getting used to an entirely different culture can be challenging. While it's also nice to learn about cultures online or from books, nothing comes close to experiencing cultural diversity in person. You learn to appreciate each and every single one of the differences while you become more culturally fluid.

The real voyage of discovery consists not in seeking new landscapes, but having new eyes



CK Editor - Add Image



The screenshot displays the CK Editor interface. At the top, a toolbar contains icons for image operations: crop, zoom, alt text, and delete. The main content area features a large image of a sunset over a beach. In the background, a factory with several tall chimneys is visible on the left side. The sun is low on the horizon, casting a golden glow over the water and sky. The foreground shows the wet sand of the beach with gentle waves lapping at the shore. Below the image, there is a white text input field with the placeholder text "Enter image caption".

Enter image caption

Plone



Plone editor features

- Layout options
- Adds blocks
- Uses markdown
- Table editor
- Can use TinyMCE

Plone Editor



HOME NEWS EVENTS USERS NEW PAGE

SEARCH

< Document Block

Home / New Page

Type the title...

+

MOST USED

- Image
- Listing
- Video
- Grid
- Teaser Grid
- Images grid
- System

TEXT

MEDIA

COMMON

Editor shortcuts

MOD+B: STRONG
MOD+I: EM
MOD+U: U
MOD+S: DEL
ON WINDOWS, THE MOD KEY IS CTRL, O

Markdown shortcuts

TITLE

SUBTITLE

* UNORDERED LIST ITEM
+ UNORDERED LIST ITEM
- UNORDERED LIST ITEM
1. ORDERED LIST ITEM
1) ORDERED LIST ITEM

> BLOCK QUOTE

BOLD TEXT
BOLD TEXT
ITALIC TEXT
ITALIC TEXT
--STRIKETHROUGH TEXT--

Advanced settings

Override TOC entry

Plone Editor - Add Image



< Document Block

Image

photo_2021-05-17_07-21-35.jpg



Origin photo_2021-05-17_07-21-3

Alt text

[Describe the purpose of the image.](#) Leave empty if the image is purely decorative.

Alignment

Size

Plone Editor - Add Table

The screenshot displays the Plone Editor interface. At the top, there is a navigation bar with a home icon and the text "New Page". Below this is a text input field with the placeholder "Type the title...". A toolbar contains several icons, including a table icon. A table is currently inserted into the editor, consisting of two columns and two rows. Below the table is another text input field with the placeholder "Type text...". On the right side, a settings panel is open, showing the "TABLE" section. The following options are visible:

- Fixed width table cells
- Divide each row into separate cells
- Stripe alternate rows with color
- Make the table compact
- Reduce complexity
- Table color inverted

Below the "TABLE" section, the "CELL" section is partially visible, showing the option:

- Header cell

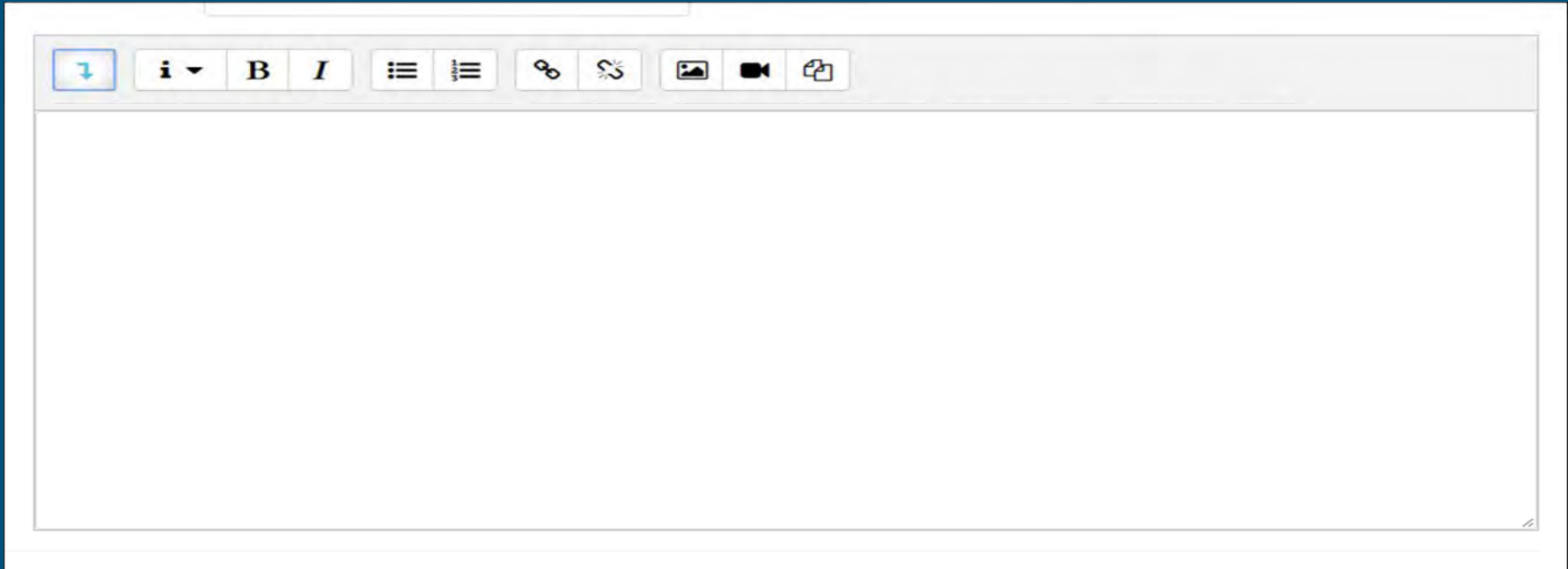
Atto



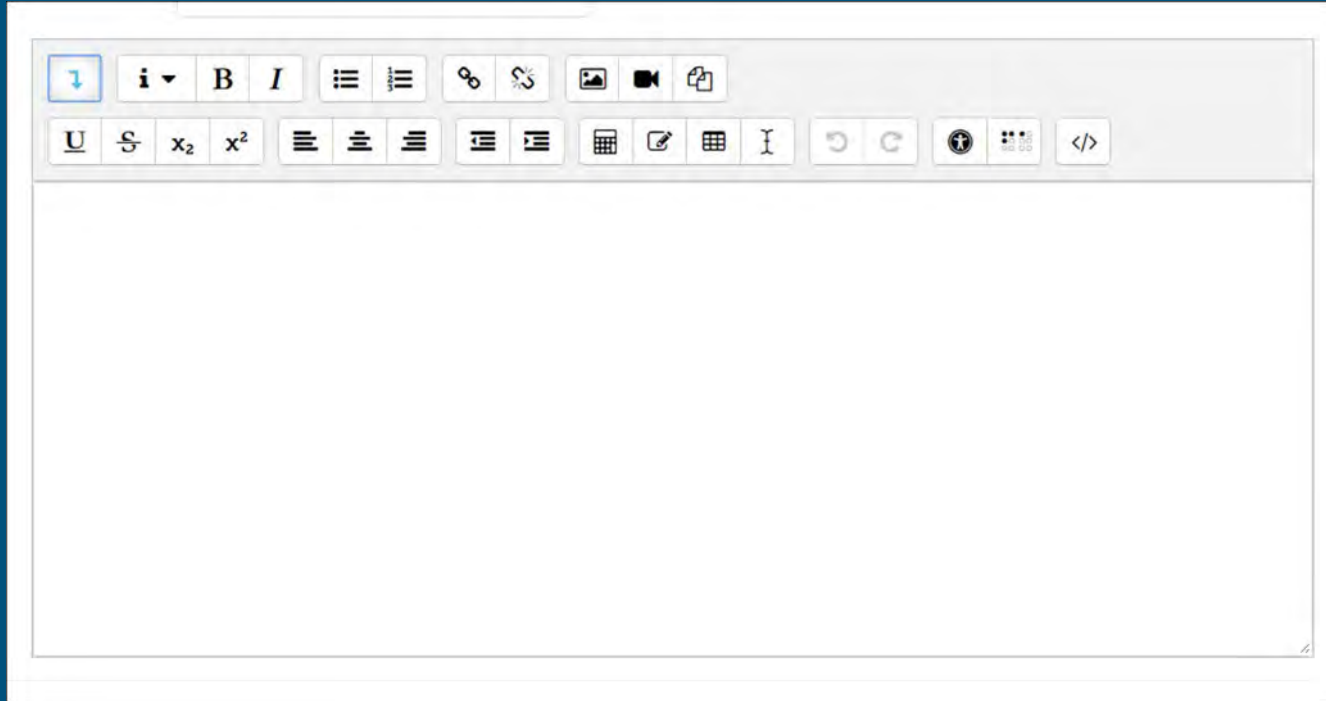
Atto editor features

- Text editor (like Word)
- Accessibility checker
- Screen reader checker
- Prompts when adding media
- Prompts when adding tables
- Feature rich equation editor (Using [Mathjax.org](https://www.mathjax.org/))

Atto Editor



Atto Editor additional options



Atto Editor Checker

- Images with missing alt text where the aria role is not marked as presentation
- Text with an insufficient contrast ratio compared to the background (WCAG AA)
- Long blocks of text with no headings
- Tables with no captions
- Tables with merged cells
- Tables with no row/column headers

Atto - Editor Checker


new Label ⓘ

Accessibility checker ✕

The colours of the foreground and background text do not have enough contrast. To fix this warning, change either foreground or background colour of the text so that it is easier to read.

1. [Dublin city](#)

The Dublin Convention centre is situated beside the liffey in Dublin city.



Open up one of your websites or Moodle courses

As we go through these tips -

Make a note on how you can improve the content.

Images Tips

- Alt descriptions
- Repeat any image text in alt
- Complex images need longer text descriptions
- Avoid meaning with colour alone
- Avoid low colour contrast
- Avoid pixelation
- No flashing!

Check out some of the images in
your course.

Make a note on how you can
improve the images in your
course content.

Layout Tips

Essential for long content

- Use HTML5 headings, e.g. <H1 >
- Structure
- Context
- Follow hierarchy, e.g. H3, H4, H5
- Keyboard / Tab indexing
- Be responsive (Theme)

Check out some of the structure
of your course/page.

Make a note on how you can
improve the layout and structure
in your course content.

Links Tips

- Descriptive links
 - Avoid url as link text
 - Avoid “Click here”
- Use “New Window” targets with caution
- Be identifiable as links, using CSS
- Consistent naming

Check out some of the links in
your course.

Make a note on how you can
improve the **links** in your course
content.

Multimedia Tips

- Deliver via accessible media player!
 - E.g. Moodle default, video.js
 - Ensure viewer has controls
- Closed Captions (CC)
- Subtitles
- Text transcripts

Check out some of the media in
your course.

Make a note on how you can
improve the multimedia in your
course content.

Table Tips

- Tabular data only!!
 - i.e. Don't use for layout...
- Caption
- Row & column headers
- No merged cells
- No nested tables
- Align data consistently
- Alternate row colour (zebra)

Check out some of the tables in
your course.

Make a note on how you can
improve the tables in your course
content.

Tables

new

Create table



Caption

Caption position

Define headers on

Number of rows

Number of columns

Create table

Activity: Create this table

Cape Town Weather

| Day | Forecast | High | Low |
|----------|-------------------------|------|-----|
| Friday | Scattered Thunderstorms | 79 | 69 |
| Saturday | Sunny | 82 | 70 |
| Sunday | Sunny | 82 | 70 |
| Monday | Thunderstorms | 83 | 71 |

Text Tips

- Colour Contrast
- Cope with zooming in and out
- Avoid meaning with color alone
- Consistent naming
- Lists (&)
- For bold, , not
- For italics, not <i>
- Use capitals appropriately, e.g. acronyms

Check out some of the text content in your course.

Make a note on how you can improve the Text in your course content.

Equation Tips

- Avoid using images of equations
- Use accessible equation displays:
 - Atto equations (Mathjax)
 - Feature rich
 - Great looking
 - Fully accessible
 - Equation writers using Mathjax
 - Wiris

STEM

Atto Equation Editor

- Feature rich editor
- Great looking equations that are fully accessible
- Using mathjax.org to expose questions to assistive technology

Atto - Equation Editor

The screenshot displays the Atto Equation Editor interface. At the top, there is a title bar "Equation editor" with a close button. Below the title bar is a toolbar with four tabs: "Operators", "Arrows", "Greek Symbols", and "Advanced". The "Advanced" tab is currently selected. The toolbar contains several buttons for mathematical symbols: $\sum a, b$, $\sqrt[b]{b+c}$, $\int_a^b c$, $\iint_a^b c$, $\iiint_a^b c$, $f a$, (a) , $[a]$, $\{a\}$, $|a_1 a_2 a_3 a_4|$, $\frac{a}{b+c}$, \vec{a} , $\binom{a}{b}$, $\begin{bmatrix} a \\ b \end{bmatrix}$, and $\begin{Bmatrix} a \\ b \end{Bmatrix}$.

Below the toolbar, there is a text input field labeled "Edit equation using TeX" with the text `\sum{a,b}` entered. Below the input field is an "Equation preview" section showing the rendered equation $\sum a, b$ with a downward arrow indicating the insertion point. Below the preview, there is a text block: "An arrow indicates the position that new elements from the element library will be inserted." At the bottom of the interface is a "Save equation" button.