

Student User Experience

...

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Web
Design
Dude

User
Experience
Dude

Accessibility
Dude

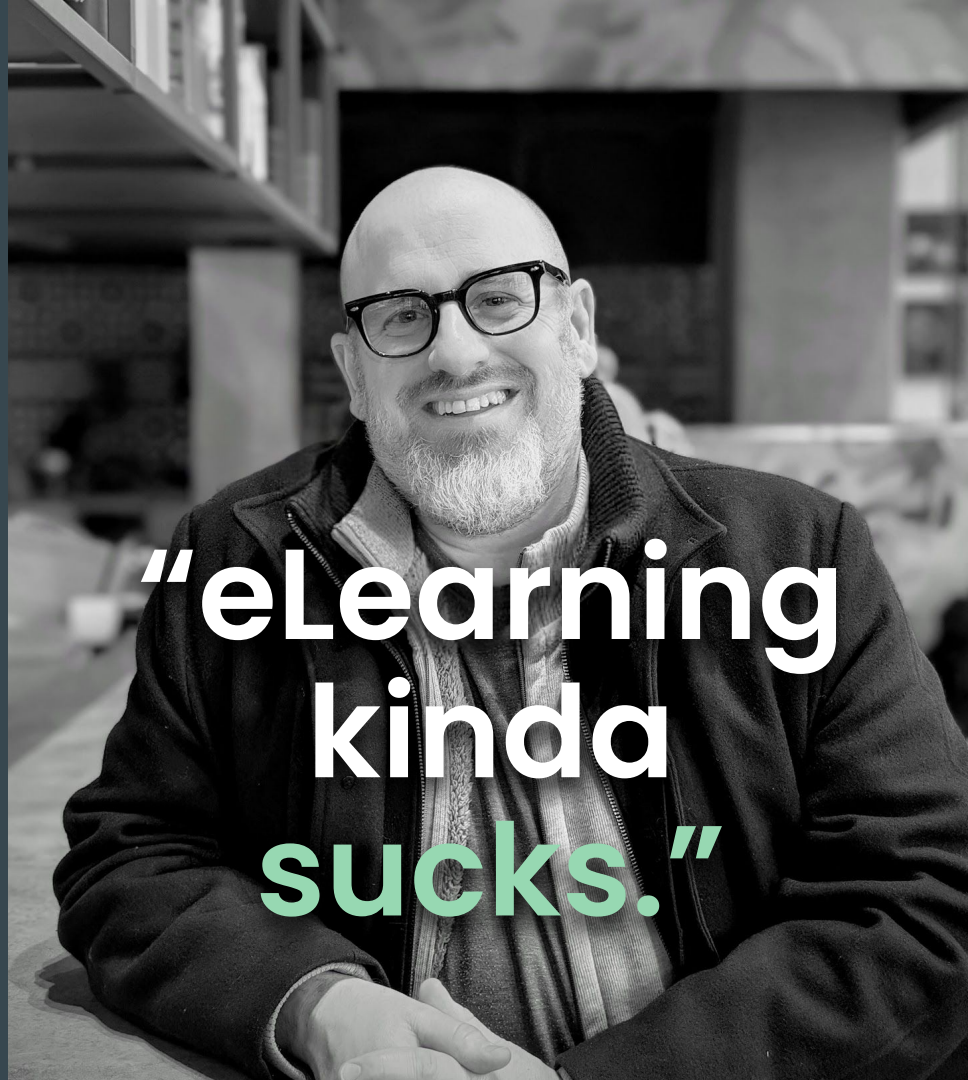
IAAP
CERTIFIED
CPACC



Having spent nearly 16 years in post secondary building marketing and online learning experiences as a eLearning Specialist and Multimedia/Web Developer...

I can honestly say,

<RElearning>



“eLearning
kinda
sucks.”

Start thinking about the
Student User Experience (SUX)

Goal

Simplifying decades of web/multimedia experience into concepts educators can apply to their own eLearning practice

Educators Achieve:

- Basic understanding of content-centric HTML to encourage consistency, page structure, semantics, and troubleshooting
- Develop a better appreciation of web design concepts
- Appreciate extra effort leads to improved accessibility
- Ensure improved compatibility between LMS'

Goal

Simplifying decades of web/multimedia experience into concepts educators can apply to their own eLearning practice

We will cover:

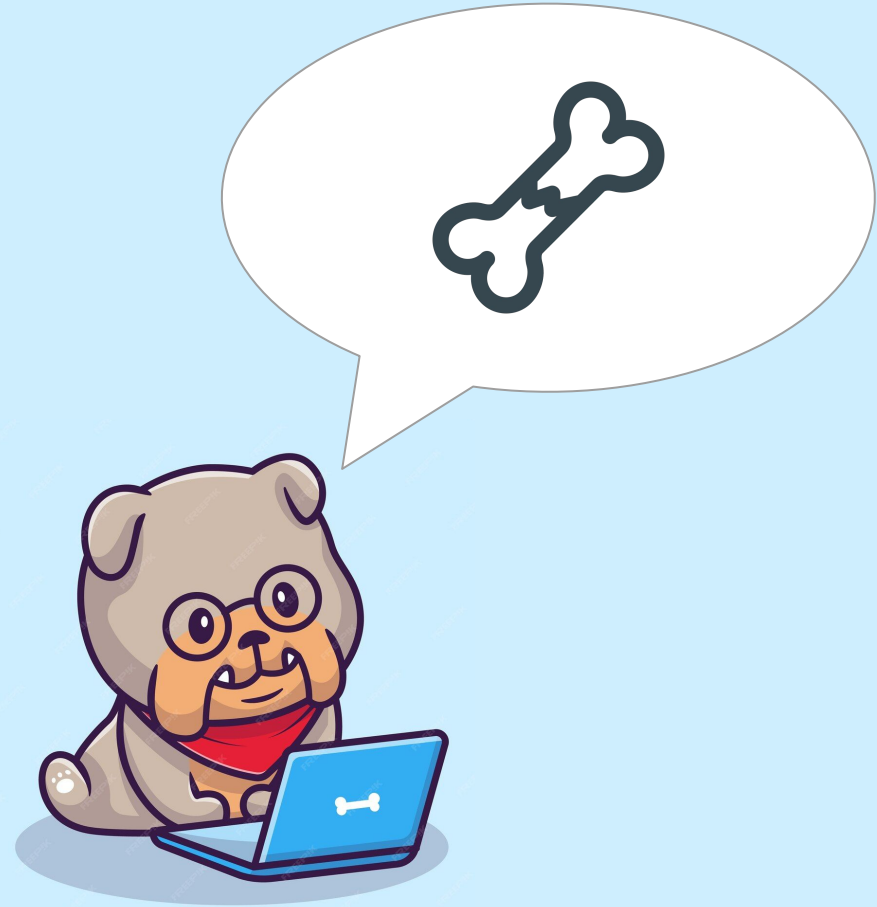
- Why is SUX Important?
- Three Core Concepts
- Best Practice & Examples
- Bring it all Together
- Tools & Resources
- Questions

Why is SUX Important?

The **Learning Management System (LMS)** takes care of the heavy lifting of course delivery, design, user experience, accessibility, and so much more for the institution.



However, as educators integrating curriculum into the LMS; you still need to be mindful of **content-centric best practices** to ensure effective student user experience.



Focusing on **simplified best practices** broken down into easy to understand concepts...

We can provide enhanced eLearning experiences for all students regardless of their abilities.



Three Core Concepts

Web Design, User Experience and Accessibility are **interconnected concepts** working together to deliver effective online experiences.

What is **Web Design**?

Web design focuses on the appearance, layout, and **content** of a website.

Implications for **eLearning**

Educators need to be mindful how to use branded templates, structure content logically, build visual items thoughtfully, and **ensure consistency**.

What is User Experience (UX)?

User Experience focuses on the overall ease of use of a website and the **content**.

Implications for eLearning

Educators need to be mindful how to organize curriculum simply, reduce steps when possible, iterative improvements through regular feedback, and **effective consistency**.

What is Accessibility?

Accessibility focuses on ensuring all users, regardless of their abilities, can access the curriculum.

Specifically, users need to be able to **perceive, understand, navigate, and interact** with the **content** on the LMS.

Implications for eLearning

Educators need to be mindful that accessibility efforts improve experiences for all users, allows adaptive devices and software to access content, adapt to specific needs by providing options, and **consistency** lessons the cognitive load for students.

Best Practice & Examples

Brand Awareness

Leveraging the organizations brand for consistency and familiar experiences

Understanding Brand Usage

- Have you reviewed brand the guidelines?
- Are you using the logo correctly? Is it the most recent version?
- Are you using the correct font or colours?
- Are you using available templates?

<RElearning>

Logos:

<RElearning>

Colours:



Fonts:

Headings – Poppins Semibold

Body – Poppins Normal

Accent – Average

Templates:



Understanding Brand Usage

- Have you reviewed brand the guidelines?
- Are you using the logo correctly? Is it the most recent version?
- Are you using the correct font or colours?
- Are you using available templates?
- [U of A Toolkit](#) > Faculty & Staff



Logos:



Colours:



*Some of the available U of A colours

Fonts:

Headings - Roboto Slab

Body - Roboto Normal

Office Substitutions - Georgia (Roboto Slab) & Calibri (Roboto)

Templates:



Media

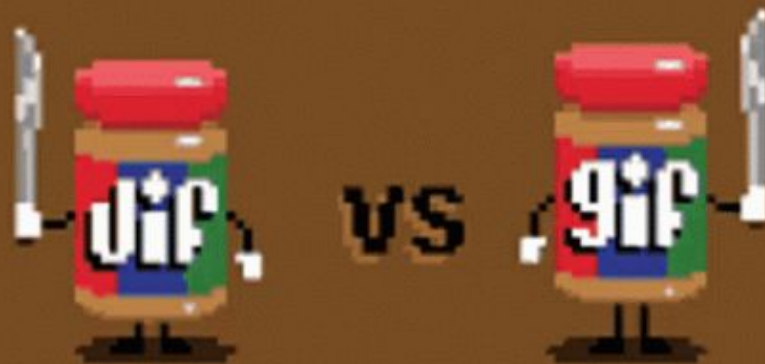
Helpful best practices to ensure effective and inclusive use of media material

Image Types

There are three image formats consistently used online:

- GIF
- JPG
- PNG

These images have different purposes and are optimized effectively for their specific use.



GIF:

Optimized for illustrations; simple colour palette (256 colours), limited transparency and simple animations.

Image Types

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JPG:

Optimized for photographs with lots of colours, shades, contrasts & details.

Image Types

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- GIF
- JPG
- PNG

These images have different purposes and are optimized effectively for their specific use.



PNG:

Best of both worlds. High quality with transparency. However files sizes are larger.

Image Clarity

Screenshots are an effective way to create instructive content quickly and relatable.

However, they can be difficult to read and impossible to understand for users relying on adaptive tools such as screen readers.

The screenshot shows a form from Alberta Health Services. At the top left is the logo and the text "Healthy Albertans. Healthy Communities. Together." The main heading is "Are you experiencing any of the following:". Below this is a bulleted list of symptoms: "severe difficulty breathing (e.g., struggling for each breath, speaking in single words)", "severe chest pain", "having a very hard time waking up", "feeling confused", and "lost consciousness". At the bottom are two buttons labeled "YES" and "NO".

Two callout boxes highlight accessibility issues:

- A brown callout box at the top right points to the list of symptoms, containing the text: "Small text can be hard to read".
- A brown callout box at the bottom right points to the "YES" and "NO" buttons, containing the text: "Extra whitespace taking up real estate".

Image Clarity

By adjusting the **width of the browser window** prior to taking the screenshot; we can capture an image with improved legibility.

Leveraging tools like **Awesome Screenshot** allow you to capture and annotate images within a browser.



**AWESOME
SCREENSHOT**

Are you experiencing any of the following:

- severe difficulty breathing (e.g., struggling for each breath, speaking in single words)
- severe chest pain
- having a very hard time waking up
- feeling confused
- lost consciousness

YES

NO

Image Clarity

But is this image accessible?

Include effective and contextual ALT tags to our images to ensure screen readers can relay the value of the images content.

Are you experiencing any of the following:

Sample ALT Tag:

Captured from the AHS COVID-19 Self Assessment Survey. The survey is asking the user if they are experiencing any of the listed symptoms. Followed by a list of symptoms and yes or no buttons.

NO

Image Clarity

Can we make this MORE accessible?

PERHAPS a hybrid option by combining image (header) and HTML text (body).

Less information in the image ALT tag and a screen reader can read the information effectively.

Are you experiencing any of the following:

- severe difficulty breathing (e.g., struggling for each breath, speaking in single words)
- severe chest pain
- having a very hard time waking up
- feeling confused
- lost consciousness

YES

NO

Image Clarity

Images might be of lesser quality and difficult to read.

Improving clarity of images is important to improve legibility. **Reverse image searching** (Google or TinEye.com) could locate:

- Higher quality versions
- Open-source alternatives
- Editable with the right tools

Original - low quality, textured and hard to identify highlighted spots.

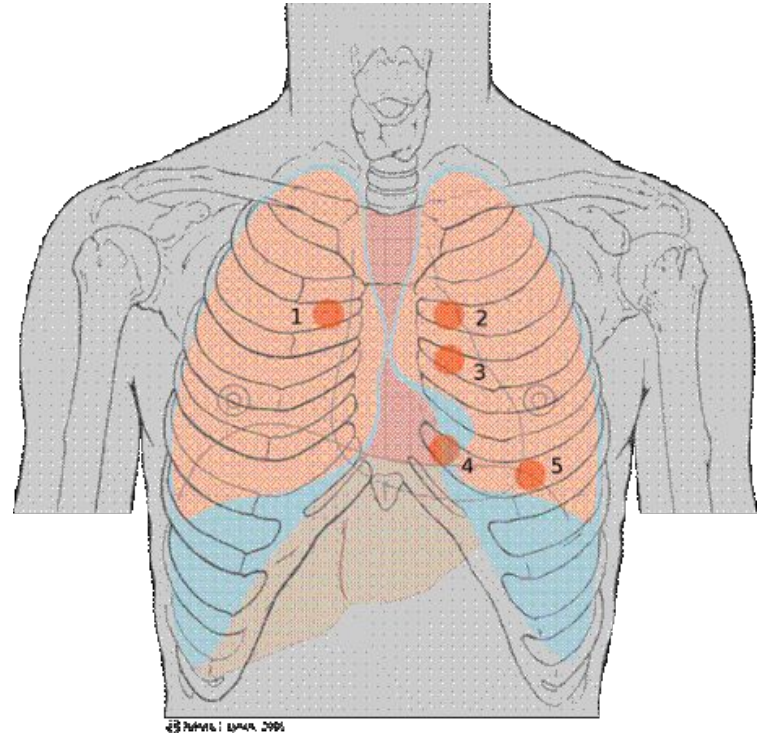


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Source Image - High quality and editable from Wikicommons.

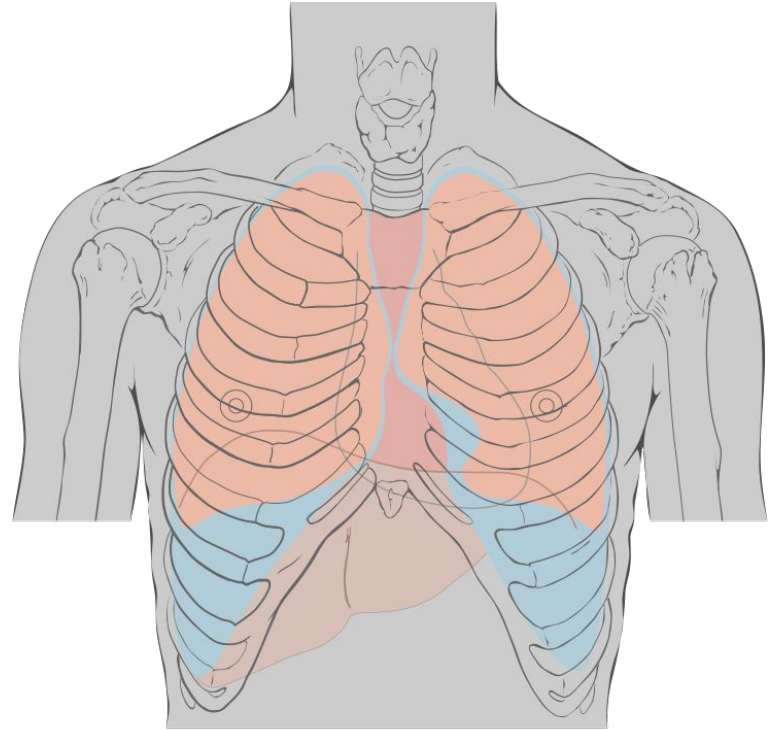


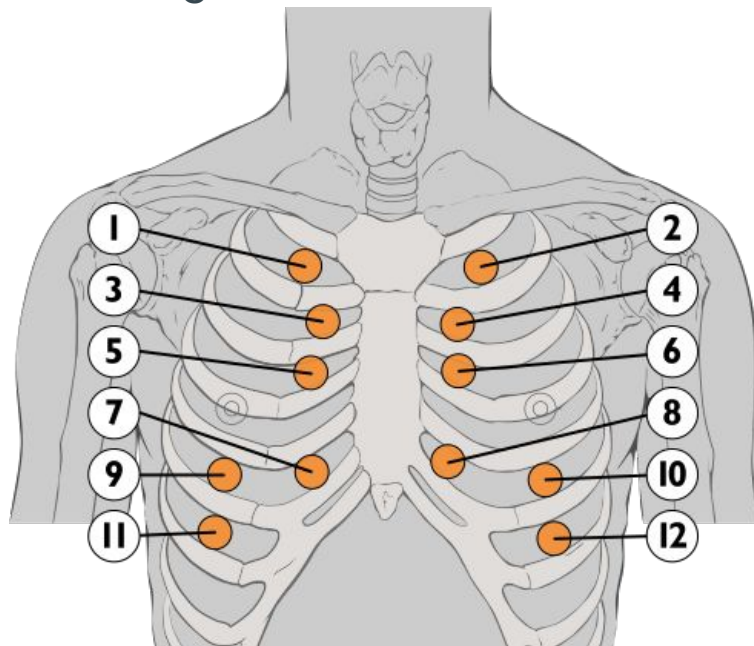
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Final Image - modified for simplicity, highlight areas of importance, and added high-contrast labels.



Is this image accessible? It depends.

Audio/Video

Sharing produced or sourced audio/video material to students, make sure it is:

- Clearly spoken and easy to follow
- Easily accessed through embedding or hyperlinking
- Captions and/or transcripts make sense. Auto-generated could have errors and poor punctuation

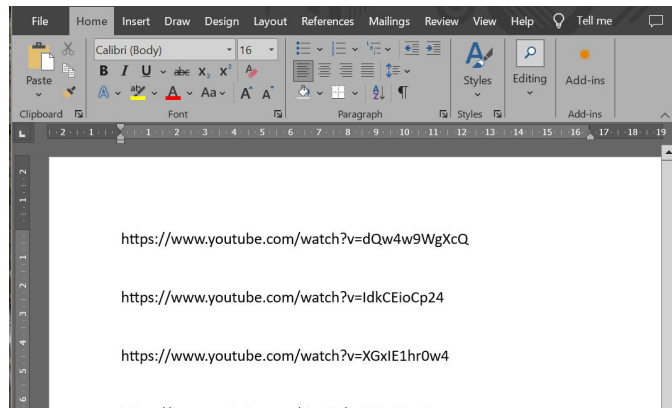


Documents

Documents (PDFs, Docs, presentations, etc) are an effective tool of eLearning.

Used to deliver knowledge, share stories, provide learning resources & templates, and enable collaboration.

However, when used incorrectly, they can be problematic.



Student Steps:

1. Download the file
2. Open the Word document
3. Select a URL and copy it
4. Switch back to the browser
5. Paste the URL into the address field and press enter
6. View the material
7. Repeat steps 3 - 6 until all videos are viewed.

This can be replaced with a web page!

**A DOCUMENT IS
NOT A SUBSTITUTE
FOR A **WEB PAGE****

Documents

When working with document files, consider these questions when integrating documents in your course:

Is this simple one page document better suited as a web page?



Is this a template or collaboration file that students can edit?



Is this document a lengthy resource that students need to read but not edit?



PDFs: Avoid using photocopy scans

HTML

The backbone of any web page

Does this sound familiar?

All you need to do is remove the existing formatting by copying the text into Notepad or TextEdit before adding the content into the LMS.





Why Strip Formatting:

- Content (text) created using Word processing tool has a lot of hidden formatting rules.
- Some LMS' poorly interpret these formatting rules and create problematic HTML code. This could impact how the content is displayed and accessed by students.
- Without formatting rules we can leverage the LMS design rules (headings, space, links, etc) and require minimal customizations.

What is HTML?

Hypertext Markup Language (HTML) is the coding language that all webpages are built on.

When originally created, HTML was simple language that rendered text. **This text is accessible by design.** It just matters on how we build and structure content.

Educators need to focus on content in the body of a web page.

```
<html>
  <head>
    <title>Sample Web page</title>
  </head>
  <body>
    <h1>Hello World</h1>
    <p>This is a sample web page</p>
  </body>
</html>
```



Hello World

This is a sample web page

Advantages of Using HTML?

- Ability to troubleshooting issues or clean up poorly created code.
- Leverage the LMS' design rules (CSS) that complement the organization's brand guidelines.
- HTML can be copy and pasted between separate web pages.
- LMS to LMS; Transition is easier with less customizations to text

```
<html>
  <head>
    <title>Sample Web page</title>
  </head>
  <body>
    <h1>Hello World</h1>
    <p>This is a sample web page</p>
  </body>
</html>
```



Hello World

This is a sample web page

To edit **HTML**,
look for the HTML button



Note: Canvas should have a similar looking option

Semantics

Semantic HTML is using `<elements>` to create page structure, add descriptive value, and consistency.

The benefits include:

- improved content clarity
- effective page organization
- design flexibility
- enhanced accessibility.

Headings

- Start at `<h1>` and go down to `<h6>`. Font size and style is determined by the LMS.
- Web page hierarchy is aided by strategic use of headings
- Allows accessibility tools to preview and quickly skip to headings and subheadings within a web page.
- LMS will typically use `<h1>` in any web page; start with `<h2>` or `<h3>` with your own content.

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Heading Examples:

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6



```
<h1>Heading 1</h1>
```

```
<h2>Heading 2</h2>
```

```
<h3>Heading 3</h3>
```

```
<h4>Heading 4</h4>
```

```
<h5>Heading 5</h5>
```

```
<h6>Heading 6</h6>
```

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Paragraphs

- Majority of text uses the `<p>` element
- Works with links, bold, emphasis and other HTML elements used to convey context
- Line break `
` is for division of lines **within a paragraph**. Useful for poems or addresses.
- Option to declare the language

```
<p>This is a sample paragraph used  
to present your content. </p>
```

```
<p lang="fr-CA">Ceci est un exemple
```

Screenreader can correctly pronounce

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Lists



Effective way to break up content into easy to read ordered `` or unordered `` elements

```
<ol>
  <li>Quiz</li>
  <li>Midterm</li>
  <li>Final</li>
</ol>
<ul>
  <li>Quiz</li>
  <li>Midterm</li>
  <li>Final</li>
</ul>
```

1. Quiz
 2. Midterm
 3. Final
- Quiz
 - Midterm
 - Final

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`` vs ``



- `` indicates importance, seriousness or urgency.
- `` used to catch readers attention. Has no contextual value and should be avoided.
- **Overuse of bolded text could become hard to read & urgency or seriousness is minimized.**

```
<p>The exam will be on <strong>Monday at 9AM</strong>. Do not forget to study!</p>
```

Semantics


Semantic HTML is using `<elements>` to create page structure, add descriptive value, and consistency.

The benefits include:

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- enhanced accessibility.

Not all Italics are Equal

They may look the same, but provide different contextual information to users:

- `` can be used to express emphasis 
- `<i>` can be used for text that is set off from the normal prose
- `<cite>` can be used to mark up the title of a cited creative work in references

Semantics

Semantic HTML is using `<elements>` to create page structure, add descriptive value, and consistency.

The benefits include:

- improved content clarity
- effective page organization
- design flexibility
- enhanced accessibility.

Hyperlinks

Effective way to connect students to resources and information.

- Avoid linking the URL text
- The link should inform the user what to expect & express action
- Make sure your link works
- `target="_blank"` will open in a new window

```
<p>  
  <a href="https://youtu.be/MItcS74Xuxc"  
  target="_blank">Learn about Dialysis</a>.  
</p>
```

[Learn about Dialysis](https://youtu.be/MItcS74Xuxc)

Semantics

Semantic HTML is using `<elements>` to create page structure, add descriptive value, and consistency.

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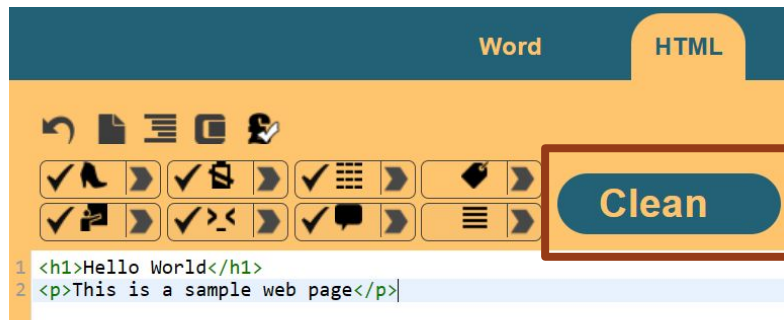
Word to HTML Editor

Online tool to copy document formatted text and to convert to cleaned HTML ready for the LMS.



Hello World

This is a sample web page



Dark Mode



Some websites provide users an **option to switch** between *light and dark modes*.

- The dark option can help those who are neurodivergent or have visual impairments
- Reduces eye strain
- Extends battery time
- The LMS should adjust **text colour accordingly**; Minimize custom text colour to avoid contrast issues

Light Mode



Some websites provide users an **option to switch** between *light and dark modes*.

- The dark option can help those who are neurodivergent or have visual impairments
- Reduces eye strain
- Extends battery time
- The LMS should adjust **text colour accordingly**; Minimize custom text colour to avoid contrast issues

Bringing it all Together

Original Content:

Pre-Lab Viewing

Not a heading

Links are hard to read with no contextual value

Elsevier (2021). Clinical skills essentials. Performing nail and foot care. Elsevier.
https://fod.infobase.com/p_ViewVideo.aspx?xtid=210381&tScript=0&e=8

Elsevier (2021). Clinical skills essentials. Shaving a male patient. Elsevier.
https://fod.infobase.com/p_ViewVideo.aspx?xtid=210414&tScript=0

3 items would be best as a list

Elsevier (2021). Clinical skills essentials. Assisting with ambulation using a gait belt.
https://fod.infobase.com/login.ezproxy.library.ualberta.ca/p_Search.aspx?bc=0&rd=a&q=clinical%20skills%20essentials%3B%20walking%20with%20a%20gait%20belt

If having difficulty with the above links:

To access videos please go to the U of A Library website and click on Subject Guides, then click on Health Sciences (HS Guides) then click on the Nursing, then click on Nursing Video Resources, select Nursing Skills Video (general) from Films on Demand and then in the search enter the title of the video you wish to view.

Hard to read instructions

Adjustment 1:

Using a <h3> heading

Same publication

Contextual hyperlinks

Pre-Lab Viewing

- Elsevier (2021) [Clinical skills essentials. Performing nail and foot care.](#) Elsevier.
- Elsevier (2021) [Clinical skills essentials. Shaving a male patient.](#) Elsevier.
- Elsevier (2021) [Clinical skills essentials. Assisting with ambulation using a gait belt.](#) Elsevier.

Unordered list

If having difficulty with the above links:

1. Go to the [U of A Library website](#)
2. click on Subject Guides
3. click on Health Sciences (HS Guides)
4. click on the Nursing
5. click on Nursing Video Resources
6. select Nursing Skills Video (general) from Films on Demand and in the search enter the title of the video you wish to view.

Could be reworded for clarity

Referring to a website; link to it!

Ordered list

Adjustment 2:

Using <cite> for the title of the resources

Pre-Lab Viewing

- *Clinical Skills Essentials*. Elsevier (2021).
 - Performing nail and foot care.
 - Shaving a male patient.
 - Assisting with ambulation using a gait belt.

Clear list order indicating hierarchy and relationships

Adjust wording to be more specific to the type of resource

If having difficulty accessing resources from **Films on Demand**, follow these steps:

1. Go to the U of A Library website
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3. click on Health Sciences (HS Guides)
4. click on the Nursing
5. click on Nursing Video Resources
6. select Nursing Skills Video (general) from Films on Demand and in the search enter the title of the video you wish to view.

Integrated hyperlink to U of A Library website

Lots of steps within the same website

Adjustment 3:

Pre-Lab Viewing

- *Clinical Skills Essentials*. Elsevier (2021).
 - Performing nail and foot care.
 - Shaving a male patient.
 - Assisting with ambulation using a gait belt.

Contextual link to a landing page; skipping several steps

If having difficulty accessing resources from **Films on Demand**, follow these steps:

1. Go to the U of A's Library - Nursing Video Resources webpage
2. Locate and select "*Nursing Skills Videos (Nursing Skills) from Films on Demand*"
3. Use the search field to enter the title of the video you wish to view

Reduced to 3 simple steps

Added emphasis for the section to locate

Before:

Pre-Lab Viewing

Elsevier (2021). Clinical skills essentials. Performing nail and foot care. Elsevier.

https://fod.infobase.com/p_ViewVideo.aspx?xtid=210381&tScript=0&e=8

Elsevier (2021). Clinical skills essentials. Shaving a male patient. Elsevier.

https://fod.infobase.com/p_ViewVideo.aspx?xtid=210414&tScript=0

Elsevier (2021). Clinical skills essentials. Assisting with ambulation using a gait belt.

https://fod-infobase-com.login.ezproxy.library.ualberta.ca/p_Search.aspx?bc=0&rd=a&q=clinical%20skills%20essentials%3B%20walking%20with%20a%20gait%20belt

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After:

Pre-Lab Viewing

- *Clinical Skills Essentials*. Elsevier (2021).
 - Performing nail and foot care.
 - Shaving a male patient.
 - Assisting with ambulation using a gait belt.

If having difficulty accessing resources from **Films on Demand**, follow these steps:

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2. Locate and select "Nursing Skills Videos (Nursing Skills) from Films on Demand"
3. Use the search field to enter the title of the video you wish to view

Tools & Resources

Tools

- [WORDHTML.com](https://wordhtml.com) – Copy and paste document text into the field; press clean to generate useable HTML for the LMS
- [Awesome Screenshot](https://awesome-screenshot.com) – Effective browser plugin creating and annotating screenshots
- [Contrast Checker](https://contrast-checker.com) – Check your colours for effective contrast
- [Emojipedia.org](https://emojipedia.org) – Emoji resource
- [Freepik.com](https://freepik.com) – Great for photos & illustrations with attribution
- [SVGRepo.com](https://svgrepo.com) – Open-licensed images & icons
- [Wikicommons](https://commons.wikimedia.org) – Free to use images
- [Tineye.com](https://tineye.com) – Reverse image search

Resources

- [Student User Experience \(SUX\): A Human-Centric Approach to Ensuring Effective e-Learning Delivery \[Paper\]](#)
- [U of A Canto](#) – Brand guidelines, logos, templates, assets and more
- [HTML Documentation](#) – Mozilla Developer Network (MDN) Web Documentation
- [W3C.org](#) – World Wide Web Consortium standards and guidelines including [Web Content Accessibility Guidelines \(WCAG\) standards](#).
- [HTML Primer](#) – Content focused HTML resource that can be copied into any LMS to visual show how different elements are presented by the site and provide context on how they are used.
- [Relearning.ca](#) – Corey's LinkedIn Profile

What about AI?

There are a plethora of AI tools out there and they are evolving incredibly fast.

But for now... These tools struggle to effectively create web pages consistently, ensure correct context, and strange hallucinations can be problematic...

Until AI is perfected, think about the Student User Experience. Once that happens; I'll be at the Artisan Market...



Questions?

Thank you.