

IMPROVING ACCESSIBILITY

in OER

Jen Booth



IMPROVING ACCESSIBILITY IN OER

JEN BOOTH



Improving Accessibility in OER Copyright © 2024 by Jen Booth is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License, except where otherwise noted.

CONTENTS

Introduction	1
Accessibility Statement	4
Acknowledgements	vi

AODA and Accessibility Basics

What is AODA and Why does it matter?	9
Who Uses Accessibility Features?	14
How Accessible Are Our Current Course Materials?	20

Starting Points: Top Issues to Check for

Text Equivalents for Visual/Interactive Content	28
Descriptive Links and Labelling	34
Careful Use of Colours and Images	38
Page and Document Structure	42

Common OER Platform and Software-Specific Limitations

Pressbooks OER	49
H5P Activities	53
Online Video Sources	56
Easy Web Accessibility Testing Tools	58

Test the Tools

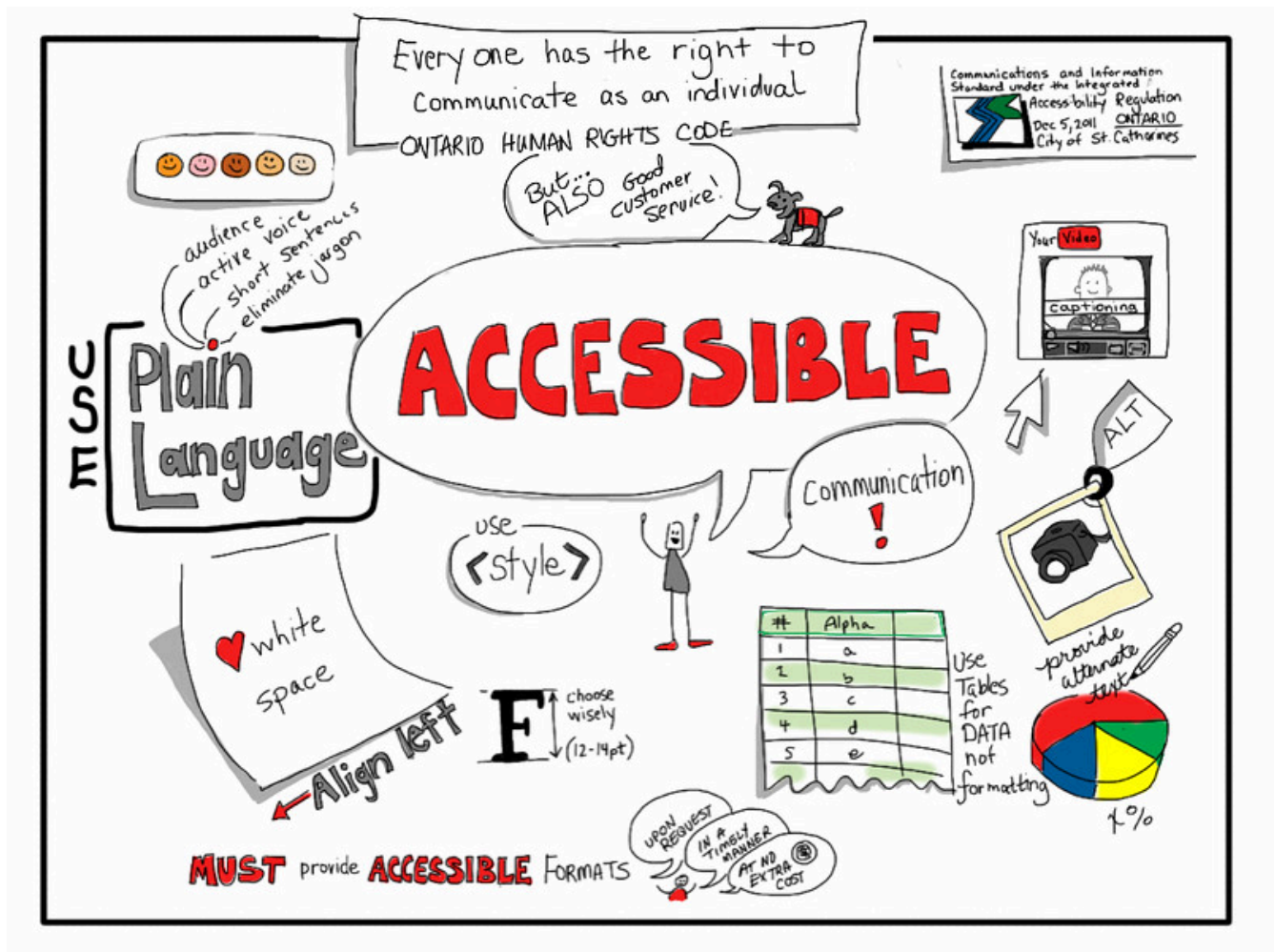
Review Pressbooks content for Accessibility	63
Review H5P Content for Accessibility	76
Review Video Content for Accessibility	79
Update & Change Log	81

INTRODUCTION

This OER is intended to provide an introduction to accessibility and AODA (Accessibility for Ontarians with Disabilities Act) considerations for open educational resource (OER) projects in Ontario. However, the principles discussed will be useful to anyone beginning their journey to understanding accessibility and usability in digital and web-based teaching materials.

Making documents, websites and learning materials accessible is a complex and important task that is often very overwhelming for professors, faculty and other educators.

This text intends to give educators a practical understanding of the types of issues that they should be looking for when selecting OER, and set them up to improve accessibility and usability of course materials.



This infographic reminds us that the Ontario Human Rights Code specifies that we need to make web content accessible to avoid creating barriers that can restrict the ability for some users to access our materials. Everyone has the right to communicate as an individual. While this is a law, accessibility also contributes to good customer service. The graphic reminds us to use plain language (consider audience, active voice, short sentences and don't use jargon), use white space and align to the left of the page, choose your fonts carefully (12-14pt is encouraged), use CSS and style sheets rather than tables for formatting, consider captions for multimedia and alt tags for images, and provide alternate text or other formats upon request, for free! **Source:** "Accessible Communication. It's the Law!" by Giulia Forsythe is licensed under CC BY-NC-SA 2.0

As you learn about accessibility principles and the types of issues we should watch for in common OER formats, you will be better prepared to select, adapt and create your own OER, improving accessibility and usability for more of your students. Accessibility and usability always exist on a spectrum, and as technology and interactivity progress, we need to continually ask questions about the nature of new resources and applications.

Accessibility should be a consideration built into our every day practices.

Though it seems like there is a significant amount of work needed to ensure that we are selecting, adapting,

and creating accessible web-based course materials, it doesn't have to be completely overwhelming. Even small modifications to our existing practices can be a big improvement.

Continue to the AODA and accessibility basics section to get started

Attribution & References

Except where otherwise noted, Introduction by Jen Booth is licensed under CC BY-NC 4.0

ACCESSIBILITY STATEMENT

Accessibility features of the web version of this resource

The web version of *Improving Accessibility in OER* has been designed with accessibility in mind by incorporating the following features:

- It has been optimized for people who use screen-reader technology.
 - all content can be navigated using a keyboard.
 - links, headings, and tables are formatted to work with screen readers.
- All images in this guide are described fully in the text, caption, alt-tag or in an image description section for complex images.
- Text versions of interactive elements have been added to improve accessibility in the webbook and usability for print, PDF and offline users
- Information is not conveyed by colour alone.
- Pressbooks has built in features such as the ability to change font size.

Other file formats available

This book is also available in PDF formats that you may save, print, access offline or use with internet access.

Efforts have been made to improve the user experience in all formats.

Known accessibility issues and areas for improvement

This book's adapters have attempted to improve upon existing features from the original sources and improve these materials for all users.

While we strive to ensure that this resource is as accessible and usable as possible, we might not always get it right. Any issues we identify will be listed below. If you encounter issues with this text, please notify your Professor.

List of Known Accessibility Issues

Location of Issue	Need for Improvement	Timeline	Work Around
Test the tools	This section has content that is specifically left without optimization for accessibility, in order to provide a spot to allow for the testing of knowledge and accessibility tools	unknown	
Video Captioning	All videos have accessible CC & transcripts via YouTube or other provider, but may not have transcripts that fully describe non-speech content.	unknown	Current provisions meet AODA requirements.
PDF version of book	PDF version of book may not be fully accessible, as it was generated using Pressbooks export.	unknown	Text versions of interactive activities added and efforts to improve link accessibility are included. Work is on-going to develop this as much as possible.

Accessibility standards

The web version of this resource has been designed to meet AODA requirements (<https://www.aoda.ca/the-act/>), along with the Web Content Accessibility Guidelines 2.0 (<https://www.w3.org/TR/WCAG20/>), level AA. In addition, it follows all guidelines in Appendix A: Checklist for Accessibility (<https://opentextbc.ca/accessibilitytoolkit/back-matter/appendix-checklist-for-accessibility-toolkit/>) of the *Accessibility Toolkit – 2nd Edition* (<https://opentextbc.ca/accessibilitytoolkit/>).

This statement was last updated on March 22, 2024

Attribution & References

This information was adapted from “Accessibility statement (<https://opentextbc.ca/pressbooks/front-matter/accessibility-statement/>)” In *Pressbooks Guide* (<https://opentextbc.ca/pressbooks>) by BCcampus , licensed under CC BY 4.0. / Adapted to match the current OER with relevant deficiencies noted.

ACKNOWLEDGEMENTS

Funding Acknowledgement

This resource was funded by the Government of Ontario. The views expressed in this publication are the views of the author(s) and do not necessarily reflect those of the Government of Ontario.



This OER was first published on **March 25, 2025**

This OER is a collection of resources adapted by Jen Booth, mixed with original content to provide an introductory guide to assessing OER for accessibility. In most sections of this OER, updates have been made to the existing content to improve usability and accessibility, incorporate interactive elements and improve the overall reading experience.

Book Cover

Book cover created in Canva (free version), using template (<https://www.canva.com/templates/EAFxnb2rgVw-white-and-grey-simple-business-book-cover/>) created by Build Up Studio (<https://www.canva.com/p/buildupstudio/>), used under Canva's Content License (<https://www.canva.com/licensing-explained/>)

Copyright & Open Licensing

Improving Accessibility in OER is licensed under CC BY-NC 4.0 (<https://creativecommons.org/licenses/by-nc/4.0/>), except where otherwise noted. Individual sections, content, images and activities are marked with their relevant copyright and open licensing information.

- YouTube videos in this OER are embedded/used under the Standard YouTube license (<https://www.youtube.com/static?gl=CA&template=terms>).
- Third-party images, text and other materials are marked with references in APA format, modified to be accessible by the inclusion of descriptive links as recommended by the APA Style website (<https://apastyle.apa.org/style-grammar-guidelines/paper-format/accessibility/urls>)

Unless otherwise indicated, third-party texts, images and other materials quoted in this OER are included on the basis of Fair Dealing (Canada) as described in the Code of Best Practices in Fair Dealing for Open Educational Resources.

AODA AND ACCESSIBILITY BASICS

The first section of this resource is designed to give you a basic introduction to accessibility issues in web content and instructional materials.

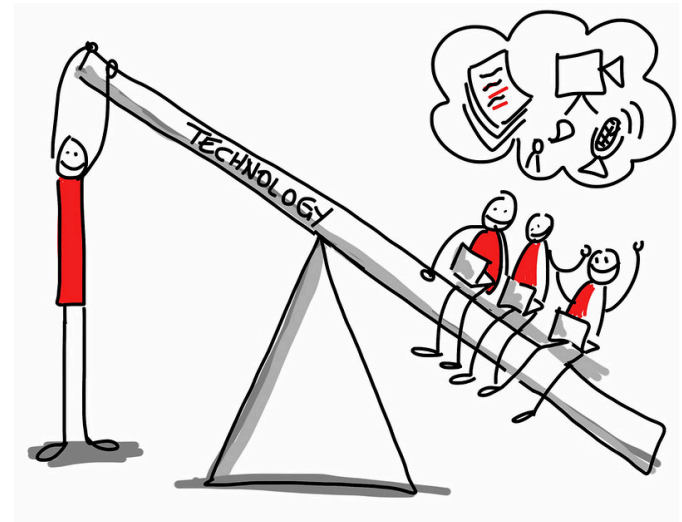
While this is not a comprehensive guide to every area of accessibility in web documents, it will provide you with background knowledge and starting points that will help you get started. After reviewing this resource, you'll be able to start making small, but meaningful changes to your course materials that will improve usability and accessibility for your students.

Before you can fully leverage open educational resources (OER) to improve access and usability in resources for your course, you need to have a basic understanding of accessibility principles and requirements, including:

- What is AODA and Why does it matter?
- Who Uses Accessibility Features?
- How Accessible Are Our Current Course Materials?

Attribution & References

Except where otherwise noted, this page is created by Jen Booth, licensed under CC BY-NC 4.0.



OER present an opportunity to leverage technology to improve accessibility and usability of materials and resources within your course, which can benefit all users! **Source:** Leveraging Technology by Guilia Forsythe, CC BY-NC-SA 2.0

Accessibility for Ontarians with Disabilities Act (AODA)

Ontario has adopted the *Accessibility for Ontarians with Disabilities Act, 2005* (<https://www.ontario.ca/laws/statute/05a11>) (also known as the AODA) that requires organizations to use accessible practices to better meet the needs of people with disabilities. The purpose of the AODA is to develop and implement accessibility standards for use in the public, private and not-for-profit sectors to make services, programs, spaces, and employment accessible to all Ontarians.

The number of Ontarians living with a disability is climbing – with an average of one in four people facing accessibility challenges every day (Government of Ontario, 2019). Providing an accessible built environment is key to reaching our shared goal in providing all individuals with the opportunity to participate actively and fully – without barriers. Often when we think about providing an accessible environment, we do envision the physically built environment – for example, curb cuts in sidewalks to facilitate ease of movement for wheelchairs, walkers, and other assistive devices. In addition to accessing physical spaces, we also need to provide barrier free access to virtual spaces. Digital – or web accessibility is critical to ensure we all have access to the same online information, support and services that are available to all. Increasing recognition of the value and importance of accessibility has led to the development of various laws, guidelines, standards, and recommendations.

In this OER, we'll focus on the AODA's information and communication standards, which has a requirement that organizations make their websites and online materials accessible. Web Content Accessibility Guidelines, often referred to as WCAG, are international guidelines created with the aim of providing common web accessibility standards worldwide. These guidelines apply to all web content, whatever the sector. To ensure that an appropriate level of web accessibility has been achieved, the AODA requires all organizations to comply with and respect the Web Content Accessibility Guidelines (WCAG) 2.0 (<https://www.w3.org/TR/WCAG20/>), Level AA.

What is meant by “web content”?

In the context of this OER, web content refers to all content found online, including information (such as text, photos, and sound and activities), as well as the code that defines the structure.

At the time of developing this resource, the most recent version of WCAG is version 2.2 (<https://www.w3.org/TR/WCAG22/>). We encourage you to keep on top of the updated requirements and legislation when it comes to web accessibility.

Assess your basic understanding of the AODA so far by completing this H5P activity or the text version of the interactive activity below.

Quick Check: AODA

Quick Check: AODA (Text version)

Check your knowledge with the following questions:

1. The *Accessibility for Ontarians with Disabilities Act, 2005* contains guidelines specific to the activities of postsecondary institutions. **True or false?**
2. The AODA requires all organizations to comply with the Web Content Accessibility Guidelines (WCAG) _____ [Blank 1], Level _____ [Blank 2].

Check your Answers in footnote¹

Activity source: “Accessibility in Ontario” by mbrunet, CC BY-NC 4.0

AODA Standards for Education

Although there are currently no AODA standards specific to the education sector, two committees were established to draft accessibility standards with this focus. The Post-Secondary Education Standards Development Committee has been specifically tasked with developing recommended guidelines for the university and college communities. The final recommendations of the Post-Secondary Education Standards Development Committee

(<https://www.ontario.ca/page/development-proposed-postsecondary-education-standards-final-recommendations-report-2022>) are due to be implemented by January 1, 2025, and address barriers such as attitudes, behaviours, instruction, as well as social, physical and financial barriers.



Three stick figures push a physical barrier out of the way while others watch and cheer. **Image Source:** AODA Doodles by Guilia Forsythe, CC BY- NC-SA 2.0

Why does Accessibility in Digital Resources (including OER) Matter?

It is likely that you will be working with students who have either documented, undisclosed, or perhaps undiagnosed needs that will be impacted by how you prepare and present your digital learning resources. As Statistics Canada (2023) records, “27% of Canadians aged 15 years and older, or 8.0 million people, had one or more disabilities that limited them in their daily activities” (para. 1). According to the International Dyslexia Association, as cited in Dyslexia Canada (n.d.), “10-20% of the population has a language-based learning disability” (para. 3), such as Dyslexia, meaning that potentially one in five of your students will likely be impacted by basic readability accessibility accommodations when creating your digital learning resources. Many Canadian jurisdictions have already enacted legislation dictating Digital Accessibility standards for instructional design of courses, as well as for digitally-mediated communications with our students, their parents, our colleagues, and the general public. In Canada, Ontario was the first province to explicitly codify Digital Accessibility standards through the Accessibility for Ontarians with Disabilities Act (AODA, 2005).

Most of the standards that Canadian provinces have put forth are based on the World Wide Web Consortium’s Web Content Accessibility Guidelines (W3C, 2022).

It is unreasonable to expect that all educators will be well-versed in all of the web-content authoring guidelines or the range of digital tools available to support the variety of accessibility needs of their students. However, it is important for everyone to be aware of certain basic accessibility standards. In some jurisdictions, you may be required to meet these basic standards whether or not you are aware of a particular student who needs accommodations (Ontario Human Rights Commission, 2016). These efforts represent small changes in practice that benefit all of our students, not just those with diagnosed needs.

You’ll learn more about this in the next section of this OER, Who uses accessibility features?

Attribution & References

Except where otherwise noted, this page is adapted by Jen Booth from

- “The AODA (<https://ecampusontario.pressbooks.pub/masteringopened/chapter/the-aoda/>)” In *Mastering Open Ed: Licensing, Accessibility, Creation, and Publishing OER*, by eCampus Ontario, CC BY-NC 4.0.
- “Accessibility in Online Learning (<https://pressbooks.pub/everydayid/chapter/accessibility-in-online-learning/>)” In *Everyday Instructional Design* by Rob Power, CC BY-NC 4.0.

References cited in-text

- Accessibility for Ontarians with Disabilities Act* (<https://www.ontario.ca/laws/statute/05a11>) . (2005). S.O. , c. 11.
- Dyslexia Canada. (n.d.). *Dyslexia basics* (<https://www.dyslexiacanada.org/en/dyslexia-basics>).
- Government of Ontario. (2019). *Accessibility for Ontarians with Disabilities Act annual report* (<https://www.ontario.ca/page/accessibility-ontarians-disabilities-act-annual-report-2019>).
- Ontario Human Rights Commission. (2016, January 6). *New documentation guidelines for accommodating students with mental health disabilities* (https://www.ohrc.on.ca/en/news_centre/new-documentation-guidelines-accommodating-students-mental-health-disabilities).
- Statistics Canada. (2023, December 1). Canadian Survey on Disability, 2017 to 2022 (<https://www150.statcan.gc.ca/n1/daily-quotidien/231201/dq231201b-eng.htm>). *The Daily*.
- W3C. (2022). *Web Content Accessibility Guidelines (WCAG)* (<https://www.w3.org/WAI/standards-guidelines/wcag/>).

Adaptation notes

Adaptations include remixing the two sources for readability, updating references and facts, improving in-text citations, updating images.

Notes

1.
 1. False. The AODA does not currently contain guidelines specific to the education sector, but does apply to the activities of postsecondary institutions. Recommendations for the university and college sector were developed in 2022 and are expected to be implemented by January 1, 2025.
 2. WCAG 2.0, Level AA.

WHO USES ACCESSIBILITY FEATURES?

Digital technology is so widely used that it is difficult to think of many activities that don't rely on digital technology of some kind. We may often take for granted that things just work. What if something you used everyday didn't work? What if you couldn't read your email? What if you couldn't log in to your online banking? What if your key card didn't let you into your building?

Many people encounter something every day that just doesn't work for them.

Consider the following scenarios

- A PDF that cannot be read out loud
- A form with required fields indicated in red text
- A video that has no caption feature

A PDF that cannot be read aloud may not affect you, but for some that inaccessible PDF might as well be blank. A form that says 'fill out the forms marked with red text' may make sense to you, but many people would not be able to decipher which fields to complete. A video without captions may not relay the information needed for someone to understand how to get their email software running.

Digital accessibility moves toward ensuring everyone can access content; that everything works.

Accessible content is not a special accommodation for small groups or individuals. Accessible content is designed for a universal audience.

This is achieved because accessible content accounts for a diversity of ways of access

Accessible digital content can be accessed, consumed, interacted with, by everyone, at the same time.

Access means depend on a variety of conditions.



This doodle shows people experiencing content in different formats, including print, online, audio, video, and more. **Image source:** AODA Doodles by Guilia Forsythe, CC BY-NC-SA 2.0

Factors that affect accessibility

There are numerous factors that may affect someone's ability to access digital content. With respect to visual elements in your course materials, consider:

- Something persistent, for example blindness
- Something temporary, like eye strain
- Something situational, such as glare from the sun

An individual's needs may be consistent, or they may change over time. Factors such as day to day life or current events can affect whether or not content is accessible to a person. Digital literacy and access to technology (and stable internet), the structure of information and the presentation of information are all factors in how accessible your information is. And, unfortunately, content can be **technically accessible** but still present significant barriers.

Truly accessible content allows everyone, regardless of their needs, to access, consume, and interact with content at the same time.

Consider that 96% of disabilities are “invisible”, that is to say they are not outwardly visible to the casual observer (Morgan, 2020). There is no way to say who accesses content in what way by looking at them. Further, statistics suggest only one-third of college students with a disability disclose their status to their school (National Centre for Education Statistics, 2022, para. 6). Additionally, 94% of high school students with disabilities get some form of assistance, while that number drops to 17% at the post-secondary level (Disability Alliance at Yale, n.d, bullet 2).

Have you ever asked or polled your students to see how they are accessing and using the content in your course, via the learning management system? If you haven't, you might be surprised by the results! Modern learning management systems (LMS) such as Blackboard and D2L have many accessibility features built in. You might find that even though you have only a few students with formal accommodations in your class, many students are using reading tools, or downloading your lessons in alternate formats via the LMS. Have you tested to see if the content you've added to the LMS is available or functioning properly in these scenarios?

Educators cannot rely on accommodation requests, or lack thereof, to decide when to make accessible

content. Accessible content is built for everyone and reduces the need to accommodate specific cases, increases the usability of content, and maximizes the independence of all users.

Creating Accessible Content

So, how do you make something digitally accessible?

Take a moment to consider who ramps are built for.



Ramps appear in many settings, both inside and outside of buildings and structures to improve physical accessibility.

Source: Digital Accessibility In *Accessibility Handbook for Teaching and Learning*, CC BY-NC-SA 4.0

Many people might answer “wheelchair users”. That is correct. Ramps are purpose-built to assist movement. They are **essential** for someone using a wheelchair to navigate and access parts of the physical world. However, most people can also use ramps. What is essential for some also benefits others.

Ramps benefit:

- People pushing a stroller or pulling a shopping cart
- People using a walker, walking stick, or cane
- Children learning to walk or anyone having difficulty with stairs
- Cyclists pushing their bikes
- People on crutches or those with other temporary disabilities
- Movers and delivery people

In the digital world there are many ‘ramps’.

Digital Ramps:

- Headings
- Alt-text or text versions of interactive/multimedia elements
- Closed captions
- Descriptive Links

Traditionally, one might think of creating accessible content as an accommodation essential for some users; but like ramps, these elements benefit everyone.

Closed Captions: One Digital Ramp

Closed captions are an example of a digital ramp that has benefits well beyond official accessibility requirements.

Closed captions could be beneficial for students who are trying to watch a video (Utah State University Accessibility, n.d.):

- in a very noisy environment
- in an environment where they must be quiet
- with low quality audio
- in a language they are just learning
- that has a speaker with an accent, or who is speaking too quickly to understand

Accessibility Spectrum

With a better understanding of digital accessibility you can create accessible content and choose accessible resources. Keep in mind, digital accessibility is not pass/fail; material may be more or less accessible than previous versions or alternate formats. Aim to provide the most accessible version of content to deliver the same information to everyone at the same time.



A stick figure pushes a data marker along a line from negative to positive. **Source:** Digital Accessibility In *Accessibility Handbook for Teaching and Learning*, CC BY-NC-SA 4.0

Maximizing accessibility allows for democratic, just, equitable, and inclusive access.

Accessibility:

- Minimizes othering
- Allows maximum independence
- Increases audience size
- Aids comprehension
- Meaningfully includes the greatest number of people
- Requires less work than accommodation
- Makes content easier to share and remix

By adopting the best practices and consulting the resources found in this guide, you will learn how to choose and create accessible content efficiently and effectively.

A final note: focus on creation and revision, not remediation. When you create new content or update existing material, focus on incorporating accessibility best practices. Do not focus on all your existing documents and worry about ‘fixing’ each one. Aim to improve as you move forward.

Attribution & References

Except where otherwise noted, this page is adapted by Jen Booth from Digital Accessibility In *Accessibility Handbook for Teaching and Learning* by Briana Fraser and Luke McKnight, CC BY-NC-SA 4.0

References cited in-text

Morgan, P. (2020, March 20). Invisible disabilities: Break down the barriers (<https://www.forbes.com/sites/paulamorgan/2020/03/20/invisible-disabilities-break-down-the-barriers/?sh=74e3108dfa50>). *Forbes*.

NCES: National Centre for Education Statistics. (2022, April 26). *A majority of college students with disabilities do not inform school, new NCES data show* (https://nces.ed.gov/whatsnew/press_releases/4_26_2022.asp).

Disability Alliance at Yale. (n.d). *Disability facts* (<https://day.yale.edu/disability-facts>). Yale University.

Utah State University Accessibility. (n.d.). *Benefits of captions*.

Adaptation notes

Small edits to the text. Addition of graphics and paragraph about accessibility features in the LMS.

HOW ACCESSIBLE ARE OUR CURRENT COURSE MATERIALS?

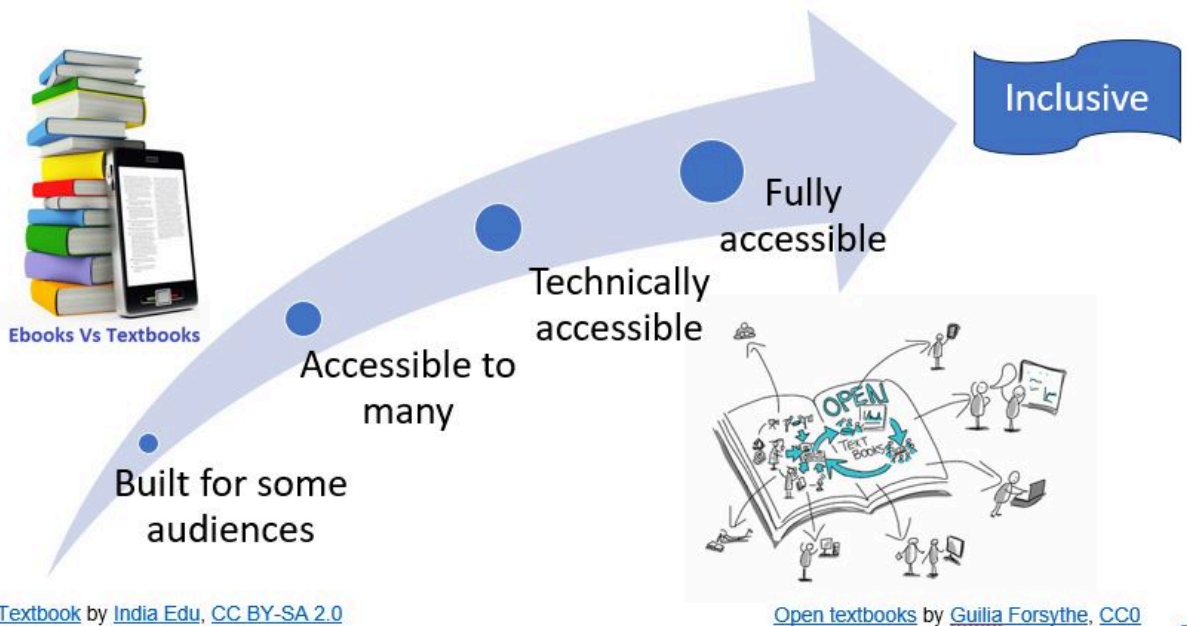
Let's take a moment to think about our existing course materials, and how accessible they are.

Consider:

- A commercially produced textbook
- Worksheets that you use with your students
- YouTube videos
- TedTalk videos
- Screencasts you created
- Your presentation files used in class

Are these things already accessible? Now consider that each of these things probably also exists in both print and digital format. Try to decide where each of these types of resources would land on the spectrum of accessibility (Cornwall, 2022) illustrated below.

How accessible are our course materials?



Traditional print textbooks, and even some eBooks are built for some audiences and perhaps even accessible to many. If you've already done some accessibility work in the documents and slides you use in your course, those resources may fall towards the middle, being accessible to many or even technically accessible. Because open textbooks typically start in digital format, they are likely towards accessible to many and technically accessible. While having resources that are fully accessible or completely inclusive is our ultimate goal, even moving your resources along the spectrum can decrease barriers and improve inclusion. **Source:** Course Material Accessibility Spectrum by Jen Booth, created in Microsoft PowerPoint, CC BY-SA 4.0.

Common Accessibility Assumptions and Myths

How many of these accessibility tips are you already aware of?

Common Accessibility Assumptions and Myths (Text version)

Headings & Document Structure

Assumption:

Headings and subheadings can be bold, italicized, or underlined to determine the structure of a document or web page.

Actually...

Titles and subtitles in bold, italics, or underlined do not allow readers to follow the structure of the document or web page. Rather, screen readers work when using the functions “Heading 1”, “Heading 2”, etc. sequentially to identify titles and subtitles.

Font sizes

Assumption:

A font size of 10 points is sufficient to ensure the accessibility of a document or web page.

Actually...

The Web Content Accessibility Guidelines (WCAG) recommend a font size of 12 or larger for the main text of a document or web page. Footnotes or endnotes should be size 9 or larger.

Descriptive Links

Assumption:

Links with “click here” and “for more details” provide enough context for all users.

Actually...

We should use links that are more descriptive of the context, such as “OER Grant Application Form” and to indicate whether this link leads to a format other than a web page, allows you to download a file or opens in another tab.

Alt-Text for Images

Assumption:

At the bottom of a web page, there is a question mark icon. The creator assigns the alt-text “Question Mark” so this meets accessibility requirements.

Actually...

More context may be needed. In this case, when users click on the question mark, they are redirected to an online form to send a message to customer service. A simple alt text that represents this action well would be “Send a message to customer service through the online form”.

Accurate Captions for Videos

Assumption:

When captioning a video, you just need to transcribe what is said verbatim. Using an automatic caption generating option (such as with YouTube) will correct any issues.

Actually...

Although this type of transcription is preferable to no captions, it is better to add contextual details, such as indicating when there is no dialogue but there is music. Note: AODA does not yet require descriptive captions, but if possible, include them. Double check/edit any captions generated automatically by systems like ScreenPal or YouTube.

Accessibility is only required if you receive an accommodation letter

Assumption:

I don't have any students with accommodations, so accessibility isn't as important in my class.

Actually...

Accessible course materials benefit many more students than we know. Not all students have

documented accommodations. Students who commute on transit might have their textbook read to them while they travel. English language learners use closed captions, transcripts and image descriptions to better understand content. Students may need to mute videos and read captions to access video content in noisy environments. Students with slow internet may turn off images, and use alt-text. Accessibility principles also contribute to Universal Design for Learning (UDL).

Activity source: H5P is adapted from Review of best practices for accessibility by Mélanie Brunet, CC BY-NC-SA 4.0. / Images and extra examples added.

Why is it important to start accessible?

If you're creating course materials or an OER from scratch, it is significantly easier to make your materials accessible with a little bit of planning. You can consider the implications for hosting your content and be proactive about making it as accessible as possible.

Starting off accessible has the added benefit of helping you to

- meet legal accessibility requirements
- proactively addressing students needs and preferences
- avoid mid-semester concerns about content
- improve upon or reduce barriers for more students

What if I'm not creating the content?

Unfortunately, we cannot assume that the OER (or other) content that we find on the web is accessible. A large number of factors can affect how accessible an OER really is, including:

- When the content was created (older sources may not meet current accessibility best practices)
- Who created the content and for what purpose – many different approaches and knowledge levels
- What platform the content was created for – different systems may have limitations
- Whether or not the content has been imported from a different source – accessibility features may be lost or specific to the original platform

While there are many, many fantastic web resources that will go into depth about all of the different areas of how to make documents and web pages accessible, many of us need practical advice on how to get started in

identifying . We may not be in the position to adapt OER content, but we can still assess our options and work to mitigate barriers as we adopt OER.

Making accessibility a priority at the point of reviewing and selecting OER will make your overall journey to improve the accessibility of resources as you incorporate that material into your teaching.

In the next section of this OER, we'll explore some of the top 5 things to consider as you review potential OER for use.

Attribution & References

Except where otherwise noted, How Accessible are Our Course Resources? is written by Jen Booth and licensed under CC BY-NC 4.0.

Image attributions – Course Material Accessibility Spectrum

- Ebook Vs Textbook by India Edu, CC BY-SA 2.0
- Open textbooks by Guilia Forsythe, CC0
- Created using Microsoft PowerPoint SmartArt

References cited in-text

Cornwall, M. (2022, February 12). *Inclusion first: How to make your product accessible and inclusive* (<https://uxdesign.cc/inclusion-first-how-to-make-your-product-accessible-and-inclusive-b8ccbeb24b22>). UX Collective.

STARTING POINTS: TOP ISSUES TO CHECK FOR

Many resources available offering comprehensive information about making web content accessible can be extremely overwhelming. In this section of the OER, we will explore some of the basic principles of accessibility in digital/web content, with the intent of helping you to start to identify easy ways to improve web content accessibility.

The sketchnote image provided on this page shows an example of many areas of web accessibility that were considered when working on a website, including descriptive links, title attributes, broken links, language tags, use of colour to convey meaning (green/red), timed re-directs, validation errors, descriptive titles and outline structures, ability to re-size the page, CSS considerations, keyboard traps, image alt tags, colour contrast, visuals used to distinguish items, tables, form elements, the WAVE tool, video controls/transcripts, other accessibility requirements, the need for monthly checks, the number of accessibility fails per month, and more.

The full list of accessibility issues that need consideration for web or digital content is highly overwhelming. In order to help you build your knowledge and start on the road to accessible, inclusive content, here are four themed areas of concern:

- Text Equivalents for Visual/Interactive Content
- Descriptive Links and Labelling
- Careful Use of Colours and Images
- Page and Document Structure



This sketchnote presents a complicated checklist of many accessibility areas that need to be considered when working on web content. **Source:** Sketchnote: accessibility, Checklists & Teamwork by Andrea Ong Pietkiewicz, CC BY-NC-ND 2.0

In each of these sections, you'll find a list of “things to look for” related to the particular theme and an explanation of some of the common issues in web content.

Review the following pages to learn more about each of these themes, and get ideas of how you can start small, and work towards overall accessibility.

Attribution & References

Except where otherwise noted, *How Accessible are Our Course Resources?* is written by Jen Booth and licensed under CC BY-NC 4.0.

Inspiration for this section of the OER comes from the fantastic OER, *Professional Web Auditing Made Easy* (<https://pressbooks.library.torontomu.ca/pwaa/>) by Digital Education Strategies, The Chang School, CC BY-SA 4.0.

TEXT EQUIVALENTS FOR VISUAL/ INTERACTIVE CONTENT

A key element of digital accessibility is ensuring that all users can access the information conveyed via visual or interactive content. We need to include visual and interactive elements in our course materials in order to improve student engagement. However, visual and interactive elements often introduce barriers for many students, as discussed earlier in the section *Who uses accessibility features?*. In order to determine how accessible any digital content is, you should review visual and interactive elements included in the resource to determine their level of accessibility.

Some accessibility features will be easy to identify as you scroll through a page in an OER and others will require the use of accessibility tools such as the WAVE Accessibility checker. Here are some questions you should ask yourself as you review visual content in OER. Learn more about each of these areas by reviewing the content under the related headings.

Questions to ask about visual content while reviewing

Images

- Does this image convey meaning, or is it decorative?
- Is this image composed primarily of text?
- Is this image complex?

Audio & Video

- Can the user turn the captions on/off?
- Are the captions accurate?
- Is a transcript provided for audio files such as podcasts?

Interactive Activities such as H5P

- Will you use the H5P in a published OER such as a Pressbook, or download/embed it within your course in a LMS?
- Is there a text version of the activity?
- How will offline users (PDF download or print) access this activity?

As you review a potential OER for inclusion in your course, consider the following issues around visual elements such as images, videos and interactive activities.

Accessibility Considerations: Images

Why is Alt-Text for Images Important?

Images without a text description will be inaccessible to those who are blind.

Images of text will also be inaccessible to blind users, and also potentially inaccessible to people with low vision, who may attempt to magnify the image resulting in the text often degrading to the point that it becomes unreadable. People with reading disabilities who use reading software may also have trouble with images of text as they cannot be read by the software.

There are occasions where images are strictly **decorative** or contain no useful information.

You can check for captions, transcripts, and description of images and video easily. Alt-text on images will not be visible as you look at the page, so you'll need to use a tool such as the Wave accessibility checker to review.

Decorative Images

Key Takeaways – Images

Ensure all images that convey meaning have alt-text, captions, or an adequate description of the image in the surrounding text.

If your image does not add meaning and is included for decorative or design purposes only, the space for the alternative text description should still be included with your image, but it should be left empty or blank. Assistive technologies will detect the image, and by leaving the alternative text description blank, you will signal to the student that there isn't any contextual content embedded. Including alternative text descriptions for decorative images "simply slows the process down with no benefit because the screen-reading software vocalizes the content of the [alternative text description], whether that alternative text adds value or not" (Berkley Web Access Group, 2012, section

4).

Images that Convey Meaning: Provide alt text & captions

No matter the subject of an image used in your content, you need to offer descriptive text. A screen reader will look for a contextual description of an image to share with readers, which should live in the text surrounding the image (title or caption) or as alternative ("alt") text. This is one of the most commonly overlooked aspects of accessibility for instructional content, but most text editors include tools for adding alt text to images.

When adding alt text to an image, be sure to clearly and succinctly describe the most important elements for the student to know. Do not include extraneous detail. In some cases, you do not need to add alt text at all, as in the case of purely decorative images.

Examples of alt-text

- Necessary descriptive alt text: "Part a of the figure shows a container which has a gas of volume V_1 on the left side and nothing on the right side. Part b shows a container which is completely filled with a gas of volume V_2 ."
- Too much descriptive alt text: "There is a figure with a white background and two squares

labeled a and b. Part a has a rectangle (representing a container) with a shaded grey section on the left half of the container with dots representing a gas. The gas is labeled V subscript 1. Part b..."

- Unnecessary descriptive alt text: "An icon of a person smiling – I put this here as a cute picture to liven up the page!"

Considerations for Audio & Video captioning

Video and audio content needs descriptive text as well, but these usually take the form of captions or, in the case of podcast or audio recordings, transcripts. You can easily add captions to videos you create by using the built in features in your software, or YouTube's built-in editor tools. For more help with this process, read through the excellent [Captioning Videos](#) guide from the University of Washington or reach out to an instructional designer at your institution.

Video with No Captions (Or Automatic Captions)

It is quite common nowadays for organizations to host their video collections with services like YouTube or Vimeo. It is important that any meaningful spoken dialogue in the videos be captioned so the content of the audio track is available to those who cannot hear it. Obviously this will include people who are Deaf, but it might also include people watching the video in a noisy environment, or watching with the sound turned down where quiet is necessary.

YouTube now provides automated captioning. It takes the audio track from the video and uses voice-recognition technology to convert the sound to text. This can be a handy feature to quickly caption a video, but video producers must not rely on automated caption to provide captions for their videos. The accuracy rate in many cases will be quite low, to the point where the captions make no sense.

The automated captions can be used as a starting point for manually-generated captions, but are not considered to be an acceptable alternative to the audio track in a video for accessibility purposes. There are a variety of free tools now

Key Takeaways – Video Captions

Ensure that all audio & video with meaningful spoken dialogue has human-generated captions. Do not rely on automated captions.

available, such as YouTube’s caption editor or the Amara caption editor, that make it relatively easy for anyone to create captions.

Here’s an example of what can happen with automated captions.

Video: When YouTube Automatic Closed Captioning Goes Wrong (2 mins) on YouTube

Considerations for Interactive Activities (H5P)

Key Takeaways – Interactive H5p

Some H5P types are not accessible. You can improve accessibility for any interactive element by creating a text version, and posting it with the activity within the LMS. If you’re creating / adapting an OER, post a text version of the activity to improve accessibility and usability for Print, PDF and assistive tech users.

Interactive activities are commonly added to OER using embed codes, and by uploading/adding H5P to Pressbooks. These activities provide a much needed break from paragraphs of text, and allow students to check their learning quickly. H5P activities can also be downloaded from Pressbooks or sources like the eCampus Ontario H5P studio, and added directly into your learning management system (LMS).

While these activities are a good example of how resources can be *technically accessible*, but may still present barriers for access. H5P maintains a list of H5P activity types that are technically accessible (<https://documentation.h5p.com/content/1290410474004879128>). Review the list and compare to make sure the OER you’re requesting is using accessible types, and consider the following suggestions:

Accessible H5P in an OER or Pressbook

- Check to make sure the activity type is technically accessible
- Look to see if a text version of the activity is provided
 - If yes – fantastic!
 - If no – remember that Print, PDF and assistive tech users may encounter barriers to this content

Accessible H5P imported into your course / LMS

- Check to make sure the activity type is technically accessible
- Consider creating and posting a text alternative for the H5P activity within the LMS as screenreaders and other reading tools, as well as options to download alternate formats will likely ignore the embedded H5P

Attribution & References

Except where otherwise noted, Text equivalents for Visual/Interactive Activities by Jen Booth is adapted from:

- Provide alt text & captions is adapted from Accessibility and Usability by Abbey Elder In *The OER Starter Kit*, CC BY 4.0.
- Decorative images is adapted from “Decorative Images” In *OER Accessibility Toolkit* by OpenUBC, CC BY-SA 4.0
- Why is alt-text for images important? is adapted from “Things to Watch for: Images without a Text description” In *Professional Web Accessibility Auditing Made Easy* by Digital Education Strategies, The Chang School, CC BY-SA 4.0

References cited in-text

Berkeley Web Access Group. (2012). *Top ten tips for making your website accessible* (<https://web.archive.org/web/20130306121016/http://webaccess.berkeley.edu/developer-information/top-ten-tips/#alt>). Archived via WayBack Internet archive.

Adaptation notes

Source content was remixed into one guide and streamlined for effective reading. Questions to ask added. Considerations for interactive activities added.

DESCRIPTIVE LINKS AND LABELLING

Another way to improve the usability and accessibility of digital and web resources is to review the way links and other elements on the page are introduced and labelled. Assistive technology such as screenreaders and reading tools handle the use of links and embedded elements on a digital page differently than you might expect. They may provide a list of links, or present links out of the context of your content, which can be confusing to these users. There are basic principles and best practices that you can watch for (and employ in your own work) that will help improve the overall experience of using your resources.

Questions to ask about descriptive links and labelling

Descriptive links and labelling are easy to pick out as you review OER content. Here are some questions you should ask yourself as you review OER content. Learn more about each of these areas by reviewing the content under the related headings.

Descriptive Links

- Do you see instances of “Click here”, “Read more” or “follow this link”?
- Does the linked text describe where the link leads?
- Are links that open a new file format or in a new tab marked with [New tab], [PDF] or another indicator?

Labelling for Embedded elements – videos, H5P, etc

- Is there a statement or heading in the text that introduces embedded elements?
- Are there links to text versions or alternatives to the embedded element that are visible/present for users?
- Do images have labelling that may help the user understand the image?

As you review a potential OER for inclusion in your course, consider the following common issues around linking and labelling.

Descriptive Links

Links That Do Not Describe the Destination or Function

Like headings, screen readers can list all of the links on a page to gather a summary of the resources that lead from it. If the link list is made up of meaningless phrases like “**click here**” or “**this link**” or “**more**”, little or no useful information is provided to the screen reader user. For most users, meaningless links like this make content more difficult to use. If you are able to see, imagine yourself coming across these links and having to read through the surrounding text to figure out where the link leads, or having to click the link to discover its destination.

Key Takeaways – Descriptive Links

Be sure all links describe the destination of the link, or its function if it is used to open a window or pop up a dialog box, for instance. Links that are labelled with [New tab] or a file format [PDF] are also helpful for all users.

Use descriptive link text instead

Ensure that all web pages and links have titles that describe a topic or purpose. The purpose of the link can be determined by the text alone. That is, you don’t need to include additional information justifying the use of the link. You want the link to be meaningful in context. For example, do not use generic text such as “click here” or “read more” unless the purpose of the link can be determined by meaning in the surrounding content.

Examples

Digital OER should have descriptive links that explain to where the hyperlink is going to navigate the reader.

- Good example: Information on the BC Open Textbook Project (<http://open.bccampus.ca/>) is available online.
- Bad example: Click here for information on the BC Open Textbook Project.

If the OER design does not permit the inclusion of explicit links in the text, implicit links can be used, and a more detailed list of sources should be provided at the end of the resource or in a separate document.

Footnotes are a great way of providing more explicit links for content without cluttering the text on a page.

Labelling Embedded elements

Key Takeaways – Labelling

While not always necessary to meet accessibility guidelines, clear labelling within an OER can help to improve accessibility and usability for many users.

Labelling in an OER can help all users to understand the context around items that are included. While not always standard practice, look for OER that have a statement that introduces a video or interactive element. This can help assistive tech to announce what is about to happen.

Consider the improvements to accessibility from the following:

- a video labelled with a Watch statement enables users who may have difficulty viewing an embedded video can easily jump to the source, such as YouTube and is helpful for assistive tech
- an image caption can be used to provide context or further explanation for the image, and all users may benefit from the additional information.
- an H5P with a clear label can be paired with a textual version, enabling Print, PDF and assistive tech users to have a better experience.

Attribution & References

- Links That Do Not Describe the Destination or Function is adapted from “Things to watch for” In *Professional Web Accessibility Auditing Made Easy* by Digital Education Strategies, The Chang School, CC BY-SA 4.0

- Use descriptive link text instead is adapted from Accessibility and Usability by Abbey Elder In *The OER Starter Kit*, CC BY 4.0.

Adaptation notes

Combined the two sources to build out this page. Added Questions to ask about descriptive links and labelling.

CAREFUL USE OF COLOURS AND IMAGES

Just as we use visual and interactive activities to make online courses and resources more interesting and engaging for our students, we also seek to improve engagement by using images and colours to help reinforce meaning. For some users, this can create a barrier to their understanding of the content. Careful consideration of the use of colours and images can help to mitigate these issues. In some cases, even a very small adjustment to our use of colour will help to build a digital ramp, enabling more students to understand and absorb the meaning we're trying to relay.

Questions to ask about the use of colours and images

While you may need a tool to assess all colour combinations, many issues of colour contrast and careful use of colour and images will be easy to see as you review OER content. Ask yourself the following questions about the use of colour and images in the OER you're reviewing.

Colour contrast

- Is there text on the page that is difficult to read because of font colour or background combination?
- Are there images with very similar colours that are difficult to tell apart?
- Am I able to see the cursor when I move my mouse around the page or try to navigate using the keyboard?

Use of colour to convey meaning

- Are there charts, maps, or other images that convey meaning using colour alone?
- Are there lists or other elements that are colour coded?

Complex images & charts

- Do you see charts, graphics, or other complex images that may require long descriptions?
- Are textual alternatives provided for infographics?

As you review a potential OER for inclusion in your course, consider the following issues the use of colour and images.

Poor Visibility or Contrast

Providing good contrast between text and the background on which it appears is important for a variety of reasons. For those with low vision, or for older readers, text may become unreadable if it does not contrast well with the background. Using an image as a background can also be problematic, particularly when content resizes and text moves over various shades of dark and light, making parts of the text difficult to read.

The visibility of the cursor's focus indicator is also important when navigating using a keyboard. Someone with low vision who may have the screen magnified several times may find it easier to navigate with a keyboard than a mouse. If they are unable to see where the keyboard focus is located, keyboard navigation becomes difficult or unusable.

Use of Colour to Convey Meaning On it's Own

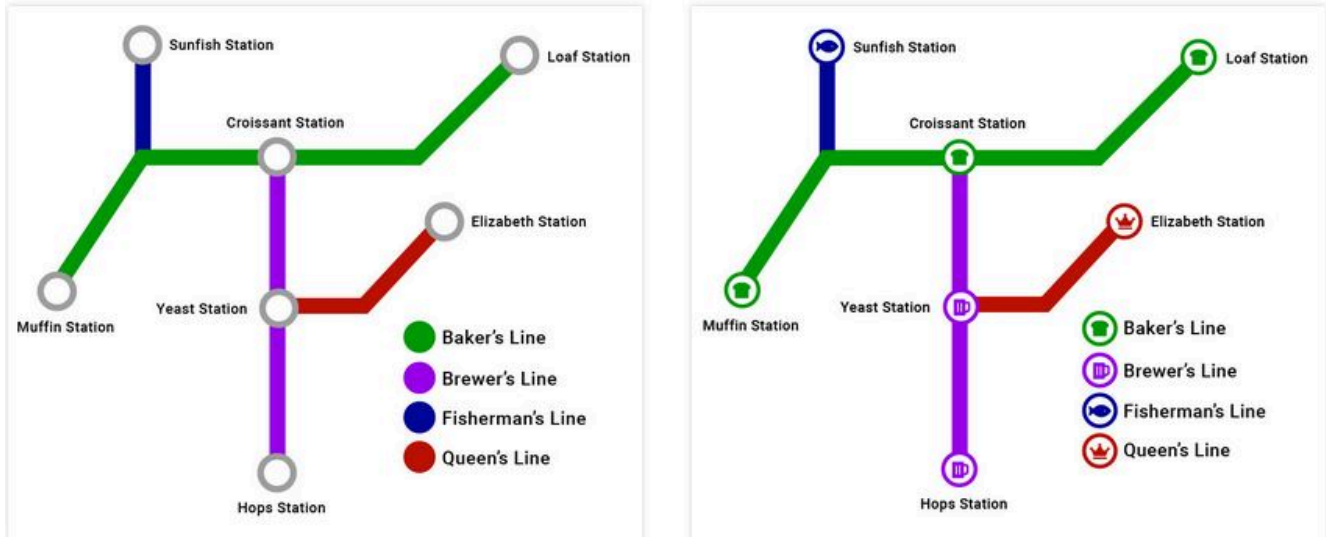
You may come across a feature that uses a green start button and a red stop button. Some colour blind users or those with low vision may not be able to tell the buttons apart. Adding the words "Start" to the green button, and "Stop" to the red button provides the extra indicator in addition to colour.

You should not rely on colour as the sole means of conveying information and instruction. If the point you are making depends on colour to be understood, you will need to edit your materials so that concepts

Key Takeaways – Use of Colour & Colour Contrast

Be sure there is good contrast between text and background colour, that the cursor's focus location is easily visible when navigating by keyboard and watch to ensure that when colour is used to represent meaning, there is some other indicator provided to express that meaning.

presented in the visuals are not lost to those who are colour blind or who require high contrast between colours.



These two diagrams demonstrate the difference between using colour as the only means to determine between the subway lines, or using colour in addition to another indicator. The left hand image shows a diagram showing 4 subway routes: Baker's Line in green, Brewer's Line in purple, Fisherman's Line in blue, Queen's Line in red. The right hand image shows the same diagram, showing 4 subway routes: Baker's Line in green with a bread icon, Brewer's Line in purple with a beer mug icon, Fisherman's Line in blue with a fish icon, Queen's Line in red with a crown icon. **Image source:** Diagrams from "Colour and contrast" by Niagara College Accessibility Hub, licensed under CC BY 4.0

Use Accessible Fonts & Colours

OER should be readable for those with disabilities related to color as well. Some best practices for ensuring that fonts and colors are accessible are described below:

- Use dyslexic-friendly fonts, such as Arial, Century Gothic, Open Sans, and Verdana. Your institution might recommend certain fonts for digital and print materials. These recommended fonts are usually chosen for ease of use and accessibility and may be a good fit for your needs as well.
- Make sure there is a clear contrast between colors (e.g. between the background and font color, or between separate colors on a graph). There are many free online tools available for checking color contrast, but we recommend WebAim's Color Contrast Checker (<https://webaim.org/resources/contrastchecker/>) and ContrastChecker.com (<https://contrastchecker.com/>).
- Do not use color to communicate meaning without other markers of that meaning present. If you have color-dependent information in images or within the text of your resource, be sure that either alternative methods of recognition (such as differing patterns) are present, or that the contrast can be adjusted by users.

Complex images and charts

Complex images refer to substantial information that may be challenging to describe in a short phrase or sentence. Learners may not understand the images without a long description. Making complex images accessible for everyone can be challenging. It involves understanding the purpose, the content itself, the audiences, and the technology to create and access alternative formats.

Attribution & References

Except where otherwise noted, Careful use of Colour and Images by Jen Booth is adapted from:

- Poor Visibility, Contrast, or Use of Colour On Its Own is adapted from “Things to watch for” In *Professional Web Accessibility Auditing Made Easy* by Digital Education Strategies, The Chang School, CC BY-SA 4.0
- Use Accessible Fonts & Colors is adapted from Accessibility and Usability by Abbey Elder In *The OER Starter Kit*, CC BY 4.0.
- “Colour and contrast” by Niagara College Accessibility Hub, licensed under CC BY 4.0
- Complex images and charts and “Use of Colour” are adapted from *OER Accessibility Toolkit* by OpenUBC, CC BY-SA 4.0

Adaptation notes

Text was combined from the source materials. Questions to ask added.

PAGE AND DOCUMENT STRUCTURE

The last theme we will look at is the use of embedded page or document structure elements in web or digital content to improve accessibility and usability. Unfortunately, many of us are in the habit of using font styles, sizes, bold, underline and italics to convey meaning, grab the attention of our reader, and provide visual queues to the document structure. This seems to be a hold over from the production of print-based documents that would be shared with our audience in class or in another forum. However, in order to ensure digital documents (word files, PDF files, web pages, content within your learning management system) are usable, we need to ensure we are using the built-in tools to apply proper document and page structure to all documents.

You will likely need to use an accessibility tool such as the WAVE Accessibility checker to help you identify page and document structure issues in OER. You may also need to download supplemental files and check them in your own version of Word, PowerPoint or PDF to ensure that additional resources attached to the OER are also accessible.

Questions to ask about page or document structure

Use of headings

- Has the creator used headings to create document structure?
- Are the headings properly nested, to provide visual consistency and navigational elements for assistive technology?

Lists

- Are there ordered lists (1, 2, 3) that are visible, but not created using an ordered list?
- Are there content elements that look like unordered lists, but are not structured properly using an unordered list?

Ancillary resources

- Do the ancillary resources such as Word files, PDF or PPT files have proper document structure?
- Are image only PDFs included?

As you review a potential OER for inclusion in your course, consider the following issues with document and page structure.

Text That Looks Like a Heading, But Is Not

People who using a screen reader to navigate through web content will have a feature in the screen reader to list the headings on a page, so they can potentially jump to any one of those headings and begin reading. The list of headings also provides a good overview of the content on the page, making it easier to find specific information. When “heading-like” presentation of text is used (e.g., making the text bold and large), the structure provided by proper headings will be missing, requiring these users to navigate through the entire page to discover its content. This greatly increases the effort needed to move through web content. Always **be sure proper HTML headings are used** to represent page sections instead of styled text.

Likewise, headings should not be used to style large bold text, where the text is not a heading or section title. This creates confusion when listening to a heading list with a screen reader.

Use heading levels (h1, h2, h3)

Text-based OER should always have a clear and logical structure. Using headings and other structural elements to organize your resource can make it easier for all learners to access and understand the material. Many editing tools support table of contents (TOC) generation based on where these section markers are

Key Takeaways – Headings

Check to ensure all heading or section titles within web content are created using proper HTML heading markup (h1, h2, etc.) and that heading levels are properly nested.

placed. This can help students navigate to a specific chapter or section of a text, especially if the digital version of the resource has its TOC hyperlinked to each section within the text.

Individuals using screen readers can also more easily navigate the sections of your content when headings levels have been applied consistently.

Lists That Look Like Lists, But Are Not

Key Takeaways – Lists

If a collection of items looks like a list, be sure HTML list markup is used to format it as a list. If the order of the items is important, an ordered list should be used; otherwise, use an unordered list.

Screen readers will recognize a properly-formatted list using HTML ordered or unordered list markup (OL or UL), announcing the list and the number of list items, and indicating one’s position in the list while navigating through it. This information helps with memory and comprehension. Without the proper list markup, more effort is often required to comprehend a list of items. Once you are familiar with an OER format such as Pressbooks, it may be come easier to pick out improperly formatted lists just by visual inspection.

Use true lists

While they may “look” similar to bulleted lists, using asterisks or icons to create a visual list of items can confuse a screen reader that is expecting to encounter structured content. Whenever listing items, use the true list features of your content editor, such as bullet points or numbered lists.

Examples of poorly structured lists

Good example:

- First list item
- Second one

Bad example:

- * First list item
- * Second item

Ancillary Resources and Files

When considering the overall accessibility of an OER, pay attention to ancillary resources that may be linked to, or embedded within the PDF. This might include things like worksheets, PowerPoint files, and resources included in PDF format.

Microsoft Word files

Check attached Microsoft Word files by downloading them and opening them on your computer. Run the Microsoft Word accessibility checker to see if the file has proper document structure, alt-text and other features enabled. While a file that is not perfectly accessible may still be usable, it's important to know if these resources will be functional for your students.

PDF files

Download attached PDF files, and determine if they contain readable text. Watch carefully for PDF files that may be scanned images, which are not accessible to very many users.

PowerPoint files

Check attached PowerPoint files by downloading them and opening them on your computer. Run the accessibility checker to see if the file has proper document structure, alt-text and other features enabled. While a file that is not perfectly accessible may still be usable, it's important to know if these resources will be functional for your students.

Key Takeaways – Ancillary resources and Files

When assessing an OER, make sure to review attached files, downloadable worksheets and other ancillary resources to determine if these have proper document structure and accessibility features.

Attribution & References

Except where otherwise noted, Page & Document structure by Jen Booth is adapted from

- Text That Looks Like a Heading, But Is Not and Lists that look lists but are not are adapted from “Things to watch for” In *Professional Web Accessibility Auditing Made Easy* by Digital Education Strategies, The Chang School, CC BY-SA 4.0
- “Use heading levels (h1, h2, h3)” and “Use true lists” are adapted from Accessibility and Usability by Abbey Elder In *The OER Starter Kit*, CC BY 4.0.

Adaptation notes

Content from source pages combined. Questions to ask added. Ancillary resources added. Small edits for readability throughout.

COMMON OER PLATFORM AND SOFTWARE-SPECIFIC LIMITATIONS

While there are extensive tests you can run to determine the overall accessibility of digital resources, it's also important to recognize that many platforms and software packages have limitations to the amount of customization an OER adopter/creator can implement.

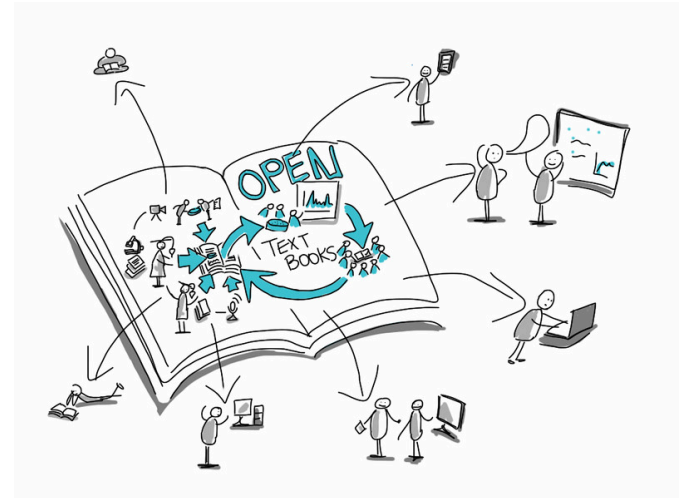
Because we have limited ability to change the software packages/platforms, focus your accessibility review on the *content* that is added into these systems, as the end product is only as accessible as the content the creator has added.

The more you focus on reviewing content for accessibility, the more knowledge you will build about the specific limitations of certain file formats and platforms. In the pages that follow review some questions you can ask yourself about resources you find in particular platforms and software as you review for accessibility.

At the end of this section is an introduction to easy web accessibility texting tools that will help you to assess some of the basics we've reviewed in this book.

- Pressbooks OER
- H5P Activities
- Online Video Sources
- Easy Web Accessibility Testing Tools

These questions will become more helpful as you work towards adapting OER that you find, unless you have contact with the OER creator and can influence some of their decision making!



In this doodle, a book labelled “open textbooks” sits open, and arrows extend from the book to stick figures who are interacting with the content from the book in multiple ways, including reading a print copy, watching a video, doing presentations in person, demonstrating or presenting content and more.

Source: Open Textbooks by Guilia Forsythe, CC0.

Attribution & References

Except where otherwise noted, Common OER Platform and Software-Specific Limitations by Jen Booth is licensed under CC BY-NC 4.0

PRESSBOOKS OER

The eCampus Ontario Pressbooks publishing platform (<https://ecampusontario.pressbooks.pub/>) is a common OER platform used within Ontario post-secondary institutions, and was used for the creation of this book. Pressbooks, as a platform, presents the opportunity to publish web books in a reasonably accessible system. At present, Pressbooks does not have any built-in accessibility¹, so users who create these books must assess their books using other accessibility tools.

While Pressbooks provides an accessible starting point, OER created in Pressbooks are only as accessible as the content that is added, imported, or created within them.

Questions to ask about OER published in Pressbooks

- Does the content added contain any of the issues we reviewed in Top Issues to Check for?
- Is the theme used for this particular OER considered accessible?
- Has the creator enabled downloadable formats or created alternate formats?
- Has the creator used a large number of H1 headings, or have they started their content with H2 and beyond?
- Does the OER have a creative commons license that will allow you to adapt/modify small sections that don't meet accessibility requirements, and make them available in your LMS?

As you review a potential OER for inclusion in your course, consider the following issues related to the platforms the OER is built upon.

Pressbooks

Check the user-added content

Using what you now know about some key accessibility themes identified in this book, review the content of pages in the OER for issues. The first 3 issues will be easily visible as you review a page. You'll probably need to use a tool such as the Wave accessibility checker to effectively check page and document structure.

1. Does the content include text equivalents for visual features (images, videos, interactive activities)?
2. Are descriptive links and labelling used for links, captions on images, etc?
3. Do colours of text/background have good contrast? Are means other than colour used to convey meaning?
4. Has the creator used proper heading structure? Do downloadable documents have appropriate structure?



Pressbooks that are created with the Jacobs theme do not have the blue colour, and are upper/lower case, using the font Montserrat for both headings and body text. **Source:** Pressbooks Themes option.

Check the Book Theme

Choose a style that has an accessible font and good spacing between the characters and lines. Look for:

- Books that use a sans serif font. These are easier to read for a variety of learning disabilities.
- Books that use a font that has distinct characters. In other words, different letters should not look nearly identical. One test to check this is called the “I l 1” test. Each should look fairly different from one another if you have picked a good font.
- Books with good spacing between letters. Fonts that are very cramped are more difficult to read.

Recommended themes for accessibility are:

- Malala
- Jacobs

You can see an example of a book with a customized version of this theme – Communication Essentials for College (<https://ecampusontario.pressbooks.pub/gccomm/>). eCampus Ontario Pressbooks typically default to the Malala theme, although individual creators can switch the theme at their discretion.

Check for alternate formats

Are PDF or other format types available to download from the Pressbook that you’re reviewing? While OER creators/adapters may not have the ability to control the way Pressbooks exports PDFs or other files, the availability of other formats can still improve accessibility and usability for our students. Having a “downloadable” version of the book may enable users with poor internet, students who use reading and note taking tools and others to have more access to the OER materials.

Finally, editable files, even if not perfect, could allow students, adaptive technologists and other supports to adjust the content to their own needs, which also improves overall accessibility of the book.

1.

MALALA

Early Greek and Roman Cosmology

The apparent shift in the direction of an object as a result of the motion of the observer is called parallax. We call the shift in the apparent direction of a star due to Earth’s orbital motion *stellar parallax*. The Greeks made dedicated efforts to observe stellar parallax, even enlisting the aid of Greek soldiers with the clearest vision, but to no avail. The brighter (and presumably nearer) stars just did not seem to shift as the Greeks observed them in the spring and then again in the fall (when Earth is on the opposite side of the Sun).

This meant either that Earth was not moving or that the stars had to be so tremendously far away that the parallax shift was immeasurably small. A cosmos of such enormous extent required a leap of imagination that most ancient philosophers were not prepared to make, so they retreated to the safety of the Earth-centered view, which would dominate Western thinking for nearly two millennia.

How Do We Know Earth Is Round?

In addition to the two ways (from Aristotle’s writings) discussed in this chapter, you might also reason as follows:

Malala

Pressbooks using Malala theme will have dark blue titles/headings that are UPPER CASE, Raleway font, unless custom CSS has been applied. Body fonts are set in Encode Sans font. **Source:** Pressbooks Themes option.

Check the CC license

When you're reviewing, keep an eye on the CC license. If an OER textbook does not have a no-derivatives clause on its open license, you should be able to put necessary content into another format within your LMS, without having to adapt the entire book. So, if the majority of the OER has accessibility features, but one area or topic is not as accessible, you could remediate just that section and have your students use it within the LMS, to improve accessibility.

Key Takeaways

Resources created in Pressbooks are only as accessible as the content that has been added to them. Starting with an accessible theme and ensuring alternate file formats are available can help to provide choice and offset accessibility issues.

Attribution & References

Except where otherwise noted, Platform and Software Specific Issues by Jen Booth is licensed under CC BY-NC 4.0. This page makes use of content adapted from the following sources:

- “Pressbooks: Check the book theme” is adapted from Making Pressbooks Accessible by McLaughlin Library, University of Guelph, CC BY 4.0. / A derivative of Accessibility Toolkit 2nd Edition by BCcampus, which is licensed under a CC BY 4.0 License.

Notes

1. Pressbooks is currently working on developing this feature, so this may improve in the near future

H5P ACTIVITIES

The eCampus Ontario H5P studio (<https://h5pstudio.ecampusontario.ca/>) is a fantastic source for interactive activities, with a growing library of elements, mostly created by Ontario educators. When openly licensed, you can embed activities found on the H5P studio into OER as well as within most major learning management systems.

Many of the H5P activities available to use or create in this system are technically accessible, however, as with Pressbooks, users need to review to make sure that user-added content has not affected overall accessibility.

Questions to ask about H5P Activities

- Does the content added contain any of the issues we reviewed in Top Issues to Check for?
- Are the H5P activities used listed on the list of accessible content types?
- Has the creator added alt-text for images, used appropriate labelling, etc?
- Is a text version of the activity made available?
- Am I going to use the H5P within my learning management system (LMS)?
- Does the OER have a creative commons license that will allow you to adapt/modify small sections that don't meet accessibility requirements, and make them available in your LMS?

As you review a potential OER for inclusion in your course, consider the following issues related to the platforms the OER is built upon.

Check the list of accessible content types

Your first question when assessing H5P activities should always going to be “Is this content type technically accessible? (<https://help.h5p.com/hc/en-us/articles/7505649072797-Content-types-recommendations>)“. Bookmark the list of accessible content types and refer back to it until you are comfortable and can recall

which content types are an issue. Specifically, any activity that relies on a background image (such as an image hotspot) is never going to be truly accessible. H5P accessibility is highly dependent on what content the creator or adapter adds to the activity.

Watch carefully for the first 3 accessibility issues we've already discussed – text equivalents, careful use of colour, and descriptive links and labelling. Unfortunately, Wave accessibility checker is not able to effectively check H5P content, so you'll need to manually check these resources.

The screenshot shows an H5P activity interface. At the top, a dark blue header contains the text "High School versus Post-Secondary Assignments". Below this, a white box with a light blue border contains the main title "High School vs. Post-Secondary Assignments" in bold black font. Underneath the title is a paragraph: "For each of the following assignment scenarios, decide whether it better reflects the high school or post-secondary experience." A blue button with the text "Start Quiz" is centered below the paragraph. At the bottom of the white box, there are three small icons: "Reuse", "Rights of use", and "Embed", followed by a small "H-P" icon. Below the white box, there is a section titled "► High School vs. Post secondary Assignments (Text version)" in bold. Underneath this title is a paragraph of text: "Activity source: "Table 1.1 Replacement" by Brenna Clarke Gray based on the content from "Chapter 1. Post-secondary Reading & Writing" In *Writing for Success – 1st Canadian H5P Edition* by Tara Harkoff & [author removed], licensed under [CC BY-NC-SA 4.0](#). / Table content adapted into an activity."

An enhanced H5P activity within a Pressbook offers a high level of accessibility, as students can also use the text version of the activity (expands upon click) below the H5P. Downloading to embed in your LMS? Copy the text version too, to ensure better accessibility within your course. You can also create your own text version and post with the activity if one is not provided. **Source:** "2.1 Reading for College" In *Communication Essentials for College*, CC BY-NC 4.0.

Consider where/how you will use the H5P

H5P that are embedded within a Pressbook or other openly accessible website are typically more accessible than those that are added into a Learning Management System (LMS) or other system that requires a login. The layering of different systems on top of each other (an H5P, then embedded in an HTML document inside an LMS) adds levels of complication for accessibility. At point of creating this content, even the built-in reading tools within an LMS may actually completely skip/ignore any content added in H5P.

It's a good idea to check the built-in reading tools and download alternate formats options within your LMS to determine how H5P are treated, and consider creating and posting a text equivalent of the activity within your LMS for H5P that will be used outside of Pressbooks.

Check the CC license

When you're reviewing, keep an eye on the CC license. If an OER textbook does not have a no-derivatives clause on its open license, you should be able to put necessary content into another format within your LMS, without having to adapt the entire book (there may be the opportunity to adjust for accessibility even with the no-derivatives license – check with your institution's copyright team for more details). So, if the majority of the OER has accessibility features, but one area or topic is not as accessible, you could remediate just that section and have your students use it within the LMS, to improve accessibility.

Key Takeaways

For H5P activities, be sure to check that the content types used are accessible, determine if there are text alternatives, and consider where you will use them to ensure they meet your needs.

Attribution & References

Except where otherwise noted, H5P Activities by Jen Booth is licensed under CC BY-NC 4.0. This page makes use of content adapted from the following sources:

- “2.1 Reading for College” In *Communication Essentials for College* by Jen Booth, Emily Cramer and Amanda Quibell, licensed under CC BY-NC 4.0.

ONLINE VIDEO SOURCES

While online video sources do not usually have open licenses, using videos from sites that allow for sharing and embedding of their content (YouTube, TED, etc) can help to improve your course materials and OER, and promote higher engagement for your students.

Most of these video sharing sites have video players that can be embedded into web documents or your learning management system. The video players themselves have a reasonable level of accessibility, and provide a familiar platform for users.

As is the case with Pressbooks and H5P, videos found on sites such as YouTube are only as accessible as the content that the creators have used to produce them. You will need to review videos that you select for accessibility concerns.

Questions to ask about Online Video sources

- Does the content added contain any of the issues we reviewed in Top Issues to Check for?
- Have captions been turned automatically generated, or edited for accuracy?
- Is a transcript available?
- Is there a link back to the original website for the video, to improve accessibility?
- Do the captions obscure any important information
- Are there other videos that say the same thing, but are more accessible?

Check for captions and transcripts

Captions

Adding automatic captions to a video is an option for creators on many platforms, but auto-generated captions can be quite inaccurate and potentially problematic. Always check to make sure the video used in an

OER (or that you intend to use) has accurate captions that are properly edited. You will likely need to watch the video with captions turned on to properly assess them.

For accessible videos, captions can be always shown on the screen (open captions) or turned on and off by using the CC button (closed captions).

Transcripts

Videos with transcripts available are an added benefit for accessibility purposes. OER content that displays a watch statement before the embedded video provide readers with even more options, including access to YouTube transcripts. If the source video is not openly licensed, you'll need to refer readers to the original site to access options such as transcripts. Here's an example of what that might look like.

Watch How to Get Transcript from YouTube Video 2024 (1 min) on YouTube (<https://youtu.be/Kv3S2F1TTwY>)

Though most embedded video players are considered reasonably accessible, users may prefer to watch on the original site to make use of other features.

Some videos, such as Ted Talks have a Creative Commons license, you should be able to link directly to, or re-post the transcript alongside the video in your OER, as long as you meet the TED Talks usage policy requirements (<https://www.ted.com/about/our-organization/our-policies-terms/ted-talks-usage-policy>).

Check for alternatives

In most cases, we can't edit the videos we find online. If you're selecting a resource to use yourself, you can review other options to see if another video relays the same content but with less accessibility issues. If you're reviewing a video that's embedded in an OER for accessibility and you're not happy with the results, consider providing an alternate for students within your LMS.

Attribution & References

Except where otherwise noted, YouTube and Other Popular Video sources by Jen Booth is licensed under CC BY-NC 4.0.

EASY WEB ACCESSIBILITY TESTING TOOLS

The previous sections in this chapter have introduced specific accessibility issues that you should watch for in common OER formats such as Pressbooks and H5P, as well as online videos that are commonly embedded within OER. As discussed, some accessibility issues can be identified with a visual inspection. For issues like page and document structure, alternate text, some colour contrast issues, the use of font and styles rather than headings, and lists that aren't really lists, you'll need a tool to help you.

There are many automated web accessibility testing tools available with **varying degrees of accuracy and coverage**. They will be introduced here in general terms, and you can experiment with them to find which ones work most effectively for you.

What can automated testing tools check for?

Key Takeaways – Automated Checkers

No automated web accessibility checker can identify all potential barriers. Human knowledge and intervention is required.

Using automated tools to assess web accessibility does not take much technical knowledge, but one often **must have some understanding of web accessibility** to be able to interpret the reports these tools generate. This is why we tackled a condensed list of what to watch for first.

Automated accessibility checkers are a must in your Web Accessibility Auditing Toolkit, though it is important to understand their limitations. Think of an automated accessibility checker like a spell checker in a word processor. Though a good start for identifying misspelled words, a person must still read through the text to ensure words have been used correctly (e.g., where “there” is used in place of “their”). For now, **human judgement must also be involved**

for any potential barriers that involve assessing meaning. For example, automated checkers can identify ambiguous phrases like “click here” or “this link” used as link text, but a person needs to determine whether this text accurately describes the link's destination or function. Similarly, a person must decide whether alt text or a long description for an image accurately describes the meaningful information in the image, something automated checkers cannot currently do.

Regardless of the features automated checkers have, you cannot rely on them to find all potential barriers in web content. A human being must also be a part of the checking process and make decisions on potential issues, particularly when meaning is involved.

An easy tool to start with: WAVE accessibility checker

WAVE is an automated checker that can be added to your browser as a free extension/plugin.

WAVE produces a report by reproducing the page that was reviewed, inserting a variety of icons into the content to identify errors (known problems) and alerts (potential problems), as well as the accessibility features that are present. Clicking on any of the icons will provide a brief description and a link to additional information.

Watch Introduction to WAVE (11 mins) on YouTube (<https://youtu.be/ITUDiTgAZY0>) for a video overview of how the WAVE tool works.

Key Takeaways – WAVE tool

Add the **WAVE extension to your browser (<https://wave.webaim.org/extension/>)** to easily check webpages for a variety of accessibility concerns.

Other Types of Accessibility Testing Tools

In addition to the typical web accessibility checkers, there are a variety of other tools you can use to test specific aspects of accessibility. We've started with just a visual inspection and the WAVE tool in order to avoid being very overwhelmed. When you're ready, you can dig deeper into web accessibility by reviewing the following sections in the Professional Web Accessibility Auditing Made Easy OER (<https://pressbooks.library.torontomu.ca/pwaa/>).

Colour Contrast Checkers (<https://pressbooks.library.torontomu.ca/pwaa/chapter/colour-contrast-evaluation/>): Colour contrast checkers can be used to determine whether colour being used in web content provides enough contrast to be readable for those with low vision or colour blindness. These tools take two colour codes (e.g., #ffffff for white, #000000 for black) and use a contrast algorithm to produce a colour contrast ratio. Many colour testing tools can be found on the Web, others can be installed as a plugin for a browser, and still others are built into web accessibility checkers.

Readability Testing Tools (<https://pressbooks.library.torontomu.ca/pwaa/chapter/readability-testing/>): There are also a variety of readability testing tools that can be used to determine the level of education one might require to effectively understand the text in web content. These tools run a series of algorithms that take characteristics of text like the length of words, the density of longer words, the length of sentences, the number of clauses in sentences, etc., and generate a score. For public web content the recommended reading level is about grade 9, or lower-level high school.

Attribution & References

Except where otherwise noted, Easy Web Accessibility Testing Tools by Jen Booth has been adapted from:

- “Automated Web Accessibility Testing (<https://pressbooks.library.torontomu.ca/pwaa/chapter/automated-web-accessibility-testing/>)“, “Limitations of Automated Web Accessibility Checkers“, “WAVE accessibility evaluation tool” In *Professional Web Accessibility Auditing Made Easy* by Digital Education Strategies, The Chang School, CC BY-SA 4.0

Adaptation notes

Small sections from each of the source pages were combined to create a simple starting point for accessibility checking.

TEST THE TOOLS

The last section of this OER is specifically designed for you to test out your new knowledge of accessibility concerns. You may want to download or access an accessibility tool as noted in Easy Web Accessibility Testing Tools, or use your own strategy, checklist or favourite tool to practice identifying issues on the following pages.

- Review Pressbooks content for Accessibility
- Review H5P Content for Accessibility
- Review Video Content for Accessibility

You can use the interactive H5P or the text versions of those activities (included below each H5P) on the following pages to check your understanding.

Congratulations! If you've made it this far, you should be well on your way to a better understanding of basic accessibility requirements for web and digital content, and be more aware of some of the things you need to watch for.

Remember, the accessibility of web and digital content exists on a spectrum. We should always be striving to identify issues in accessibility and usability, and at minimum, have a plan for improving them whenever we can.

You can address accessibility issues in your OER course materials proactively by:

- Reviewing resources for basic accessibility issues as you select and assess content
- Addressing issues proactively when you can
- Having alternate resources if necessary
- Having a road map for improving various issues, and specific areas of your course materials
- Maintaining and building your knowledge of accessibility principles



This infographic outlines the principles of OER content, and highlights that OER can transform access and affordability. In order to ensure that OER have this effect, we need to commit to identifying and fixing accessibility issues. **Source:** OER is Sharing by Giulia Forsythe, CC0. / Cropped the infographic.

Attribution & References

Except where otherwise noted, Test the Tools by Jen Booth is licensed under CC BY-NC 4.0

REVIEW PRESSBOOKS CONTENT FOR ACCESSIBILITY

Content Accessibility Testing page – Pressbooks

The following page has been modified to allow you to test your skills in identifying accessibility concerns. Try reviewing the page by yourself, and see how many issues you can identify on your own. Then, try reviewing the content using the Wave accessibility tool. Use the checklist activity at the end of the page to check your understanding.

Revising and editing are the two tasks you undertake to significantly improve your essay. Both are very important elements of the writing process. You may think that a completed first draft means little improvement is needed. However, even experienced writers need to improve their drafts and rely on peers during revising and editing.

Understanding the Purpose of Revising and Editing

Revising and editing allow you to examine two important aspects of your writing separately, so that you can give each task your undivided attention.

- When you revise, you take a second look at your ideas. You might add, cut, move, or change information in order to make your ideas clearer, more accurate, more interesting, or more convincing.
- When you edit, you take a second look at how you expressed your ideas. You add or change words. You fix any problems in grammar, punctuation, and sentence structure. You improve your writing style. You make your essay into a polished, mature piece of writing, the end product of your best efforts.

Tip

How do you get the best out of your revisions and editing? Here are some strategies that writers have developed to look at their first drafts from a fresh perspective. Try them over the course of this semester; then keep using the ones that bring results.

- Take a break. You are proud of what you wrote, but you might be too close to it to make changes. Set aside your writing for a few hours or even a day until you can look at it objectively.
- Ask someone you trust for feedback and constructive criticism.
- Pretend you are one of your readers. Are you satisfied or dissatisfied? Why?
- Use the resources that your college provides. Find out where your school's writing lab is located and ask about the assistance they provide online and in person.

Many people hear the words *critic*, *critical*, and *criticism* and pick up only negative vibes that provoke feelings that make them blush, grumble, or shout. However, as a writer and a thinker, you need to learn to be critical of yourself in a positive way and have high expectations for your work. You also need to train your eye and trust your ability to fix what needs fixing. For this, you need to teach yourself where to look.

Read the following paragraph twice, the first time without Mariah's changes, and the second time with them.

Mariah's paragraph on televisions

Nothing is more confusing to me than choosing among televisions. It confuses lots of people who want a new high-definition digital television (HDTV) with a large screen to watch sports and stream videos on. You could listen to the guys in the electronics store, but word has it they know little more than you do. They want to sell you what they have in stock, not what best fits your needs. You face information overload. Screen resolution means the number of horizontal scan lines the screen can show. Hall (2022) Explains that "modern TVs come in 1080p "Full HD" (1,920 x 1,080-pixel resolution), 4K "UHD" (3,840 x 2,160), and 8K "8K UHD" (7,680 x 4,320) variants" (para. 8). While, technically, more pixels means a clearer picture, in reality, you won't be able to tell the difference with the naked eye (Hall, 2022). The higher resolution televisions cost more, though, so those are what the salespeople want you to buy. They get bigger commissions. It's important to look for a TV with High Dynamic Range, which shows off more contrast and more lifelike colours (Hall, 2022). The other important detail to look for as you shop for TVs is its type of backlighting system. These make a big difference in the contrasts between light and dark

images and improve the overall appearance (Hall, 2022). Now here the salespeople may finally give you decent information about edgelighting, local dimming, and LED technology (Hall, 2022). But be careful and tell the salesperson you have budget constraints. Don't buy more television than you need.

Reference

Hall, P. (2022, March 30). How to choose the right TV. *Wired*. <https://www.wired.com/story/how-to-buy-the-right-tv/>

Mariah's paragraph with changes

Nothing is more confusing to me than choosing among televisions. It confuses lots of people who want a new high-definition digital television (HDTV) with a large screen to watch sports and stream videos on. **You could listen to the guys in the electronics store, but word has it they know little more than you do. They want to sell you what they have in stock, not what best fits your needs.** You face information overload. Screen resolution means the number of horizontal scan lines the screen can show. Hall (2022) explains that "modern TVs come in 1080p "Full HD" (1,920 x 1,080-pixel resolution), 4K "UHD" (3,840 x 2,160), and 8K "8K UHD" (7,680 x 4,320) variants" (para. 8). While, technically, more pixels means a clearer picture, in reality, you won't be able to tell the difference with the naked eye (Hall, 2022). **The higher resolution televisions cost more, though, so those are what the salespeople want you to buy. They get bigger commissions.** It's important to look for a TV with High Dynamic Range (HDR), which shows off more contrast and more lifelike colours (Hall, 2022). **The other** Another important detail to look for as you shop for TVs is its type of backlighting system. **Here's where salespeople give you decent info.** These make a big difference in the contrasts between light and dark images and improve the overall appearance (Hall, 2022). Now here the salespeople may finally give you decent information about edgelighting, local dimming, and LED technology (Hall, 2022). But be careful and tell the salesperson you have budget constraints. Don't **let some one talk you into buying** more television than you need.

Reference

Hall, P. (2022, March 30). How to choose the right TV. *Wired*. <https://www.wired.com/story/how-to-buy-the-right-tv/>

Tip

Many writers make their revisions on a printed copy and then transfer them to the version on-screen. They conventionally use a small arrow called a caret (^) to show where to insert an addition or correction.

Edits for coherence

[Finally](#), nothing is more confusing to me than choosing among televisions. It confuses lots of people who want a new high-definition digital television (HDtelevision) with a large screen to watch sports and stream videos on. [There's good reason for this confusion](#): You face information overload with all the options for features. [The first big decision is the screen resolution you want](#). Screen resolution means the number of horizontal scan lines the screen can show. Hall (2022) Explains that “modern TVs come in 1080p “Full HD” (1,920 x 1,080-pixel resolution), 4K “UHD” (3,840 x 2,160), and 8K “8K UHD” (7,680 x 4,320) variants” (para. 8). While, technically, more pixels mean a clearer picture, in reality, you won't be able to tell the difference with the naked eye (Hall, 2022). Also, it's important to look for a TV with High Dynamic Range (HDR), which shows off more contrast and more lifelike colours (Hall, 2022). Another important detail to look for as you shop for TVs is its type of backlighting system. These make a big difference in the contrasts between light and dark images and improve the overall appearance (Hall, 2022). More decisions will be needed about edgelighting, local dimming, and LED technology (Hall, 2022). However, depending on your viewing habits, you may not even be able to see the more expensive upgrades. Don't buy more television than you need!

Reference

Hall, P. (2022, March 30). How to choose the right TV. *Wired*. <https://www.wired.com/story/how-to-buy-the-right-tv/>

Summary of edits: Add “Finally” to opening sentence. Add to 3rd Sentence: “There's good reason for this confusion” and “with all the options for features”. Insert 4th sentence: “The first big decision is the screen resolution you want.” Add “Also” to the 8th sentence. Edit 11th sentence to include “More decisions will be needed about” and changed second last sentence to “However,

depending on your viewing habits, you may not even be able to see the more expensive upgrades.
”

Unity and Coherence Exercise

Unity and Coherence (Text version)

1. Coherence is created through effective use of (11 letters) _____.
2. The unity of a piece of writing is disrupted by a (10 letters) _____ (series of unrelated details).
3. Two adjacent sentences that are not related to each other interrupt the piece’s (9 letters) _____ .
4. An essay lacks unity if all the content doesn’t directly relate to the (6 letters) _____statement.

Check your Answers: ¹

Activity source: “Unity and Coherence” by Emily Cramer is licensed under CC BY-NC 4.0.

Choosing Specific, Appropriate Words

Most college essays should be written in formal English suitable for an academic situation. Follow these principles to be sure that your word choice is appropriate. For more information about word choice, see Chapter 13 – “Working with Words: Which Word Is Right?”.

- **Avoid slang.** Find alternatives to *bummer*, *cool*, and *rad*.
- **Avoid language that is overly casual.** Write about “men and women” rather than “girls and guys”

unless you are trying to create a specific effect. A formal tone calls for formal language.

- **Avoid contractions.** Use *do not* in place of *don't*, *I am* in place of *I'm*, *have not* in place of *haven't*, and so on. Contractions are considered casual speech.
- **Avoid clichés.** Overused expressions such as *green with envy*, *face the music*, *better late than never*, and similar expressions are empty of meaning and may not appeal to your audience.
- **Be careful when you use words that sound alike but have different meanings.** Some examples are *allusion/illusion*, *complement/compliment*, *council/counsel*, *concurrent/consecutive*, *founder/flounder*, and *historic/historical*. When in doubt, check a dictionary.
- **Choose words with the connotations you want.** Choosing a word for its connotations is as important in formal essay writing as it is in all kinds of writing. Compare the positive connotations of the word *proud* and the negative connotations of *arrogant* and *conceited*.
- **Use specific words rather than overly general words.** Find synonyms for *thing*, *people*, *nice*, *good*, *bad*, *interesting*, and other vague words. Or use specific details to make your exact meaning clear.

Now read the revisions Mariah made to make her third paragraph clearer and more concise. She has already incorporated the changes she made to improve unity and coherence.

Edits to make the paragraph more clear & concise

Finally, nothing is more confusing to me than choosing among televisions. It confuses lots of people who want to watch sports and stream videos on. There's and with good reason for this confusion: You face information overload with all the options for features. The first big decision involves is the screen resolution you want. which Screen resolution means the number of horizontal scan lines the screen can show. Hall (2022) explains that "modern TVs come in 1080p "Full HD" (1,920 x 1,080-pixel resolution), 4K "UHD" (3,840 x 2,160), and 8K "8K UHD" (7,680 x 4,320) variants" (para.8). While, technically, more pixels mean a clearer picture, in reality, you won't be able to viewers can't tell the difference with the naked eye (Hall, 2022). Also, it's important to consumers should look for a TV with High Dynamic Range (HDR), which shows off more contrast and more lifelike colours (Hall, 2022), and consider the -Another important detail to look for as you shop for TVs is its type of backlighting system. These which make a big difference in the show contrasts between light and dark images and improve the overall appearance (Hall, 2022). More decisions will be needed about edgelighting, local dimming, and LED technology (Hall, 2022).

However, ~~depending on your individual viewing habits determine whether the~~ you may not even be able to see the more expensive upgrades are beneficial. Don't buy more television than you need! [Only after buyers are totally certain they know what they want should they open their wallets.](#)

Revised paragraph after editing:

Finally, confuses buyers more than a new high-definition digital television (HDtelevision), and with good reason. The first big decision involves the screen resolution which means the number of horizontal scan lines the screen can show. Hall (2022) explains that “modern TVs come in 1080p “Full HD” (1,920 x 1,080-pixel resolution), 4K “UHD” (3,840 x 2,160), and 8K “8K UHD” (7,680 x 4,320) variants” (para. 8). While, technically, more pixels mean a clearer picture, in reality, viewers can't tell the difference with the naked eye (Hall, 2022). Also, consumers should look for a TV with High Dynamic Range (HDR), which shows off more contrast and more lifelike colours (Hall, 2022), and consider the type of backlighting system, which shows contrasts between light and dark images and improve the overall appearance (Hall, 2022). More decisions will be needed about edgelighting, local dimming, and LED technology (Hall, 2022). However, individual viewing habits determine whether more expensive upgrades are beneficial. Only after buyers are totally certain they know what they want should they open their wallets.

Reference

Hall, P. (2022, March 30). How to choose the right TV. *Wired*. <https://www.wired.com/story/how-to-buy-the-right-tv/>

Completing a Peer Review

After working so closely with a piece of writing, writers often need to step back and ask for a more objective reader. What writers most need is feedback from readers who can respond only to the words on the page. When they are ready, writers show their drafts to someone they respect and who can give an honest response about its strengths and weaknesses.

The Peer Review process is covered in more detail 7.4 – Peer Reviews

You, too, can ask a peer to read your draft when it is ready. After evaluating the feedback and assessing what

is most helpful, the reader's feedback will help you when you revise your draft. This process is called peer review .

You can work with a partner in your class and identify specific ways to strengthen each other's essays. Although you may be uncomfortable sharing your writing at first, remember that each writer is working toward the same goal: a final draft that fits the audience and the purpose. Maintaining a positive attitude when providing feedback will put you and your partner at ease. The box that follows provides a useful framework for the peer review session.

Using Feedback Objectively

The purpose of peer feedback is to receive constructive criticism of your essay. Your peer reviewer is your first real audience, and you have the opportunity to learn what confuses and delights a reader so that you can improve your work before sharing the final draft with a wider audience (or your intended audience).

It may not be necessary to incorporate every recommendation your peer reviewer makes. However, if you start to observe a pattern in the responses you receive from peer reviewers, you might want to take that feedback into consideration in future assignments. For example, if you read consistent comments about a need for more research, then you may want to consider including more research in future assignments.

Editing Your Draft

If you have been incorporating each set of revisions as Mariah has, you have produced multiple drafts of your writing. So far, all your changes have been content changes. Perhaps with the help of peer feedback, you have made sure that you sufficiently supported your ideas. You have checked for problems with unity and coherence. You have examined your essay for word choice, revising to cut unnecessary words and to replace weak wording with specific and appropriate wording.

The next step after revising the content is editing. When you edit, you examine the surface features of your text. You examine your spelling, grammar, usage, and punctuation. You also make sure you use the proper format when creating your finished assignment.

Tip

Editing often takes time. Budgeting time into the writing process allows you to complete additional

edits after revising. Editing and proofreading your writing helps you create a finished work that represents your best efforts. Here are a few more tips to remember about your readers:

- Readers do not notice correct spelling, but they do notice misspellings.
- Readers look past your sentences to get to your ideas—unless the sentences are awkward, poorly constructed, and frustrating to read.
- Readers notice when every sentence has the same rhythm as every other sentence, with no variety.
- Readers do not cheer when you use *there*, *their*, and *they*’re correctly, but they notice when you do not.
- Readers will notice the care with which you handled your assignment and your attention to detail in the delivery of an error-free document..

Chapters 11-15 of this book offer a useful review of grammar, mechanics, and usage. Use these chapters to help you eliminate major errors in your writing and refine your understanding of the conventions of language. Do not hesitate to ask for help, too, from peer tutors in your academic department or in the college’s writing lab. In the meantime, use the checklist to help you edit your writing.

Checklist – Editing Your Writing

Grammar

1. Are some sentences actually sentence fragments?
2. Are some sentences run-on sentences? How can I correct them?
3. Do some sentences need conjunctions between independent clauses?
4. Does every verb agree with its subject?
5. Is every verb in the correct tense?
6. Are tense forms, especially for irregular verbs, written correctly?
7. Have I used subject, object, and possessive personal pronouns correctly?
8. Have I used *who* and *whom* correctly?
9. Is the antecedent of every pronoun clear?

10. Do all personal pronouns agree with their antecedents?
11. Have I used the correct comparative and superlative forms of adjectives and adverbs?
12. Is it clear which word a participial phrase modifies, or is it a dangling modifier?

Sentence Structure

1. Are all my sentences simple sentences, or do I vary my sentence structure?
2. Have I chosen the best coordinating or subordinating conjunctions to join clauses?
3. Have I created long, over packed sentences that should be shortened for clarity?
4. Do I see any mistakes in parallel structure?

Punctuation

1. Does every sentence end with the correct end punctuation?
2. Can I justify the use of every exclamation point?
3. Have I used apostrophes correctly to write all singular and plural possessive forms?
4. Have I used quotation marks correctly?

Mechanics and Usage

1. Can I find any spelling errors? How can I correct them?
2. Have I used capital letters where they are needed?
3. Have I written abbreviations, where allowed, correctly?
4. Can I find any errors in the use of commonly confused words, such as *to/too/two*?

In-text citations & References

1. Have I added an in-text citation whenever I quote, paraphrase and summarize someone else's work?
2. Does each in-text citation have a matching entry on my reference page?
3. Have I used each source on my reference page within my paper?
4. Have I checked the citation style and corrected any issues with my in-text citations and reference page entries?
5. Have I verified that my whole essay is formatted according to APA style?

Exercise 4

With the help of the checklist, edit and proofread your essay.

Key Takeaways

- Revising and editing are the stages of the writing process in which you improve your work before producing a final draft.
- During revising, you add, cut, move, or change information in order to improve content.
- During editing, you take a second look at the words and sentences you used to express your ideas and fix any problems in grammar, punctuation, and sentence structure.
- Unity in writing means that all the ideas in each paragraph and in the entire essay clearly belong together and are arranged in an order that makes logical sense.
- Coherence in writing means that the writer's wording clearly indicates how one idea leads to another within a paragraph and between paragraphs.
- Transitional words and phrases effectively make writing more coherent.
- Writing should be clear and concise, with no unnecessary words.
- Effective formal writing uses specific, appropriate words and avoids slang, contractions, clichés, and overly general words.
- Peer reviews, done properly, can give writers objective feedback about their writing. It is the writer's responsibility to evaluate the results of peer reviews and incorporate only useful feedback.
- Remember to budget time for careful editing and proofreading. Use all available resources, including editing checklists, peer editing, and your institution's writing lab, to improve your editing skills.

Check your Accessibility Assessment – Pressbooks

Check your assessment – Pressbooks (Text version)

What errors did you identify on the page with a preliminary visual inspection?

1. Content that looks like a list, but isn't a list.
2. Text that looks like a heading, but isn't a heading.
3. Missing text alternatives for interactive activities.
4. Colour contrast of text on a coloured background
5. Improper heading structure
6. Images that convey meaning, without alt-text or captions
7. Use of colour alone to convey meaning

Check your answers in footnote²

What errors did you identify on the page with the Wave tool?

1. Content that looks like a list, but isn't a list.
2. Text that looks like a heading, but isn't a heading.
3. Missing text alternatives for interactive activities.
4. Colour contrast of text on a coloured background
5. Improper heading structure
6. Images that convey meaning, without alt-text or captions
7. Use of colour alone to convey meaning

Check your answer in footnote³

Activity source: Pressbooks Accessibility Challenge by Jen Booth, CC BY-NC 4.0

Attribution & References

Except where otherwise noted, this chapter (text & images) is adapted from “3.5 Revising and Editing” In *Communication Essentials for College*, CC BY-NC 4.0. / A derivative of “8.4 Revising and Editing (<https://open.lib.umn.edu/writingforsuccess/chapter/8-4-revising-and-editing/>)” In *Writing for Success* by University of Minnesota licensed under CC BY-NC 4.0. / Content on this page has been reduced in length from original to make for an easier review of issues.

Adaptation notes

This page has been deliberately adapted to introduce accessibility issues, for the purposes of training and awareness. For a more accessible version of this page, please visit the content at *Communication Essentials for College*.

Notes

1.
 1. transitions
 2. digression
 3. coherence
 4. thesis
2. Improper heading structure, text that looks like a heading, lists that aren't lists, and use of images without alt-text or captions are the items on this list that would be difficult to identify with just a visual inspection. Note that the images used on this page are mostly decorative, so they don't need alt-text, but they may still pose usability issues as screenreaders would still announce the attribution statement(s) in the captions. The interactive activities also have text versions, which are visible below the activities. The box that contains Mariah's paragraph with changes also uses colour (red) to convey the sentences that have been edited, which is not accessible.
3.
 1. One of the sets of items in the editing checklist has an ordered list that is not structured as a list. Wave identifies this as a potential list.
 2. There are several places where the heading Tip looks like a heading, but is not identified as such within Wave. The bold, larger font has been styled using html codes other than headings. While Wave doesn't mark this as an error, assistive technology would not register these as headings.
 3. Each of the activities has a text version, located below the interactive version.
 4. Wave identifies the red text in Mariah's paragraph changes example, as well as the blue text on a light blue background as having poor colour contrast, in the warning section.
 5. Wave indicates the spots where heading levels have been skipped in the "alerts" section, which will cause issues for assistive technology, and can create visual confusion if the headings aren't nested properly.
 6. The Wave tool lets you easily check if an image has alt-text. On this page, the images are mostly decorative, so it's acceptable to not have alt-text. However, due to Pressbooks structure, there may still be some usability issues, as screenreaders will read the caption under the text (used for attribution on this page).
 7. Wave doesn't identify the use of colour to convey meaning in this report, but they do identify the red text within Mariah's revised paragraph as a colour contrast issue. Human intervention is required to see that the colour would also make the edits invisible for some users.

REVIEW H5P CONTENT FOR ACCESSIBILITY

Content Accessibility Testing page – H5P

The following activities have been modified or created to allow you to test your skills in identifying accessibility concerns. The text versions of these activities have been removed. Your challenge is to review them and identify as many accessibility issues as you can. Unfortunately, the Wave tool cannot help you identify issues within these activities, so you'll have to rely on your powers of observation and/or get creative.

Explore: Identifying features of a webpage



An interactive H5P element has been excluded from this version of the text. You can view it online here: <https://ecampusontario.pressbooks.pub/accessibleoerprimer/?p=166#h5p-7>

Activity source: “Explore: Identifying features of a webpage” is adapted from “Source Type: Webpage Cues (<https://openeducationalberta.ca/introapatutorial7/chapter/website-cues/>)” In *APA Style Citation Tutorial* by Sarah Adams and Debbie Feisst, University of Alberta Library, licensed under CC BY-NC-SA 4.0 International License. / Modified to include updated screenshot of CC licensed page from same website.

Accessibility in H5P Course Presentations



An interactive H5P element has been excluded from this version of the text. You can view it online here: <https://ecampusontario.pressbooks.pub/accessibleoerprimer/?p=166#h5p-8>

Activity source: Except where otherwise noted, Accessibility in H5P Course Presentations by Jen Booth is licensed under CC BY-NC 4.0

Check your Accessibility Assessment – H5P

Check your Accessibility Assessment – H5P (Text version)

What errors did you identify in these activities with a preliminary visual inspection?

1. Activities that are listed as not accessible by H5P
2. Colour contrast of text on a coloured background
3. Images that convey meaning without alt-text or captions
4. Improper heading structure
5. Missing labels within the H5P activity itself

Check your answers in footnote¹

What strategies would be most helpful for determining if an H5P is truly accessible, when reviewing someone else's OER?

1. Look for visually obvious issues related to use of images and colour
2. Check the activities for readability with a screenreader such as Chromevox

3. Download the H5P and add it to your own H5P account on the eCampus H5P studio, open it in Lumi or upload it to your learning management (LMS) and edit it to review
4. Create a text version of the activity and post with the H5P in your LMS if you are going to reuse H5P activities outside of their original OER.

Check your answer in footnote²

Activity source: Check your Accessibility Assessment – H5P by Jen Booth is licensed under CC BY-NC 4.0

Attribution & References

Except where otherwise noted, Review H5P content for accessibility by Jen Booth is licensed under CC BY-NC 4.0

Notes

1.
 1. The first H5P on the page is an image with multiple hotspots. These are listed as inaccessible on the H5P list.
 2. The H5P course presentation contains a slide with light grey text, layered over a multicoloured image. It's hard to read without needing a tool to identify the colour contrast.
 3. This issue exists on the page, but isn't easy to check and may not be obvious upon visual inspection. You would need to download the H5P and open it separately (eg: upload it to your eCampus Ontario account or within your learning management system to check this issue) or test with a screenreader to see if alt-text is read.
 4. This is not an issue in these H5P activities, but it would be difficult to tell as the Wave tool doesn't work. You would need to download the H5P and open it separately (eg: upload it to your eCampus Ontario account or within your learning management system to check this issue) or test with a screenreader to see if alt-text is read.
 5. The slide titles have not been added to this H5P, which creates a less accessible version of the activity. You should be able to see unique slide names in the bottom left corner of the activity, but they're missing. This is not something you'd know unless you are very familiar with the Course presentation activity type.
2.
 1. This will provide a good first check of accessibility. The more you practice, the easier it will be to identify these issues.
 2. Chromevox is a free screenreader type tool available to download within the Chrome browser. It will take some getting used to, but you can use this tool to navigate through H5P activities and get an idea of the quality of the user experience
 3. This is the most comprehensive, but also the most involved way of checking accessibility in an H5P activity. You may want to do this if you intend to use the H5P activity within your LMS. This also allows you to fix or edit any issues you find.
 4. If you have the option, creating a text alternative of the activity and posting it alongside the interactive version will ensure the most students can benefit from the activity. If you're adopting an OER without editing, you could consider adding a text version into your LMS or having it ready in case students report difficulties.

REVIEW VIDEO CONTENT FOR ACCESSIBILITY

Content Accessibility Testing page – Videos

The following videos have been selected to allow you to test your skills in identifying accessibility concerns. Your challenge is to review them and identify as many accessibility issues as you can. Unfortunately, the Wave tool cannot help you identify issues within these activities, so you'll have to rely on your powers of observation.

Watch Feedback language in English – Giving positive feedback & negative feedback (4 mins) on YouTube (<https://youtu.be/sz3KRBizqYo>)

Watch Delivering a bad presentation – spot the mistakes (5 mins) on YouTube (<https://youtu.be/ATfY8dvbuFg>)

Watch What is Irony? Exploring Situational, Dramatic, and Verbal Irony (4 mins) on YouTube (<https://youtu.be/-wK5hTaANI0>)

Check your Accessibility Assessment – Video content

Check your Accessibility Assessment – Video content (Text version)

What errors did you identify in these videos upon visual inspection?

1. Captions that do not match the audio
2. Colour contrast of text on a coloured background
3. Captions that overlay potentially important information
4. Missing Captions and Transcripts

Check your Answers in footnote¹

What strategies could you employ to improve upon videos that do not meet accessibility standards, if you're adopting an OER but not ready to adapt the book?

1. Post an alternate or supplemental video within your LMS
2. Post just the chapter/page content within the LMS and update with an alternate video
3. Look for other OER content to use for that particular topic

Check your Answers in footnote²

Activity source: Check your Accessibility Assessment – Video by Jen Booth is licensed under CC BY-NC 4.0

Attribution & References

Except where otherwise noted, review Review Video Content for Accessibility by Jen Booth is licensed under CC BY-NC 4.0

Notes

1.
 1. Correct. The Teaching Intentionally video has captions that do not, in any way, match the video.
 2. The second video has several elements (notably, the PowerPoint slides shown) that display terrible colour contrast with slides with a red background and black text.
 3. Correct. Captions on the Woodward English video overlay potential information on the slides (though it's not certain if this info is essential in this particular video).
 4. Correct, no captions or transcript are available for the University of Bedfordshire video.
2.
 1. While not as good as swapping the video, this could improve accessibility.
 2. This could work as long as it meets the requirements of the creative commons license applied to the OER.
 3. This could also work, if you are not able to update/edit the content even within your LMS.

UPDATE & CHANGE LOG

March, 2024

- Original publication in webbook and PDF format