# Improving the Accessibility of Open Education Resources

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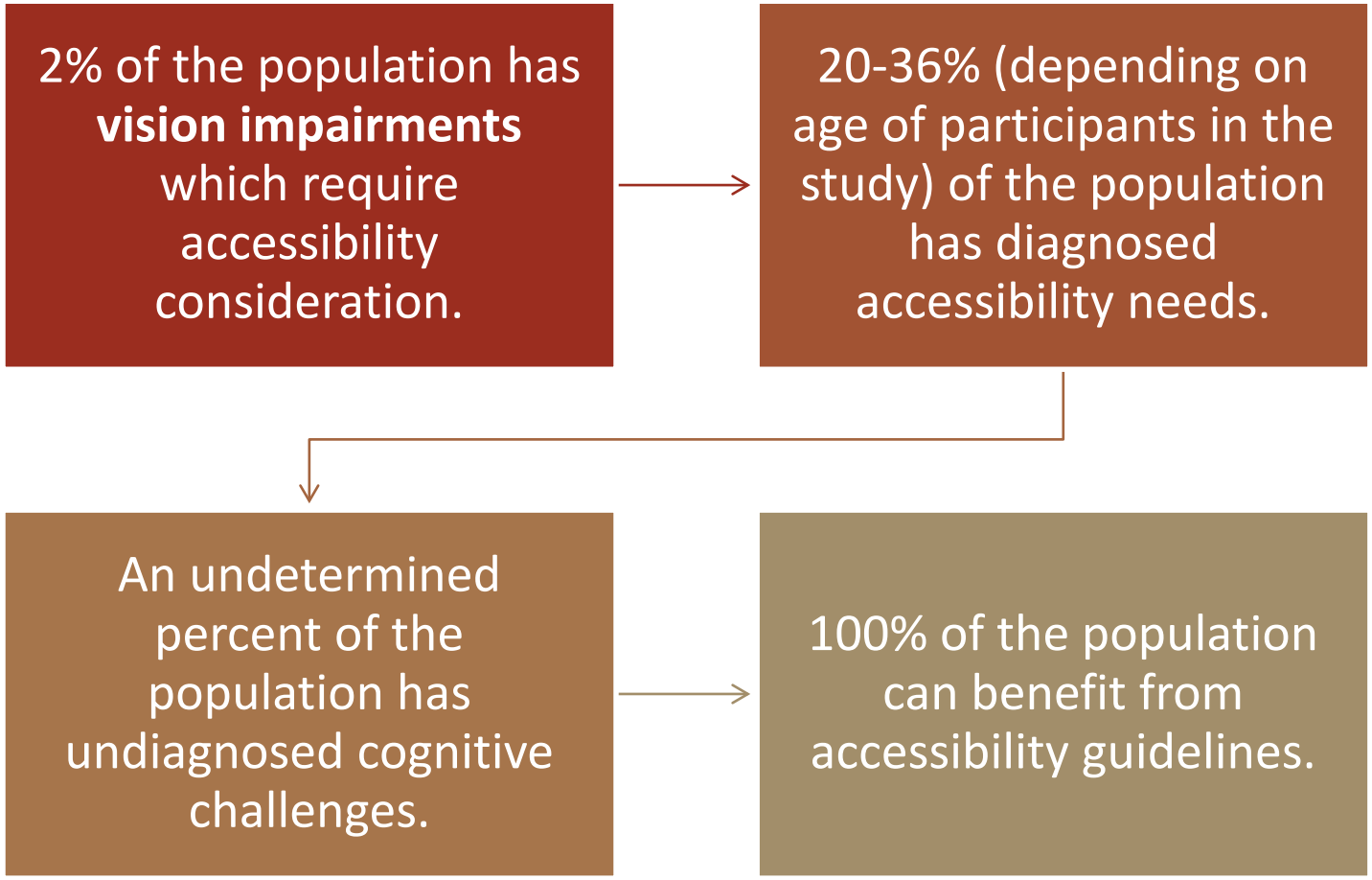
TCC CONFERENCE

# Accessibility Basics

Accessible design is a design process in which the needs of people with disabilities are specifically considered.

Web accessibility refers to the inclusive practice of removing barriers that prevent interaction with, or access to websites, by individuals with disabilities.

Many educators are provided with little or no training to help them address accessibility issues in their classroom.



# Make time to understand the standards for accessible instructional content

ADA Legislation (Section 504, Individuals with Disabilities Act (IDEA), and Section 508)

Universal Design Standards

Quality Matters Standards

General Standard 7.2 Learner support for accessibility

Standard 8 – The course design reflects a commitment to accessibility and usability for all learners.

Higher Learning Commission

# Why WCAG?

The Web Content Accessibility Guidelines help us develop content that is **adaptable**

Adaptable content **empowers students**.

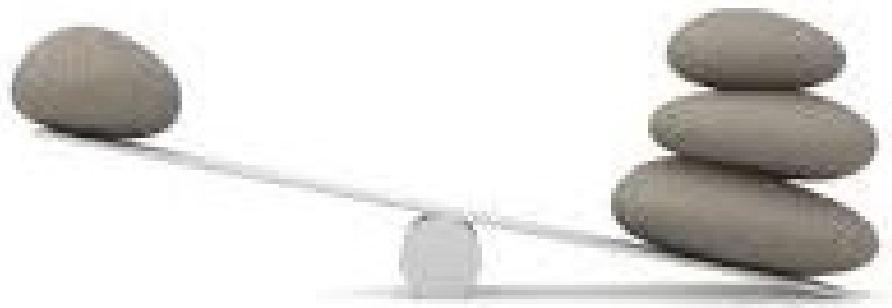
Empowered students can access the content in a way that **best fits their needs** using the most familiar tools and methods.

# What are OERs

OERs are teaching, learning, and research materials in any medium that reside in the public domain or have been released under an open license that permits their free use **and** re-purposing by others.

# Open Content is licensed in a way that grants users the permission to:

| | |
|---|---|
| **Retain** | Make, own, and control copies of the content (e.g., download, duplicate, store, and manage) |
| **Reuse** | Use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video) |
| **Revise** | Adapt, adjust, modify, or alter the content (e.g., translate the content into another language) |
| **Remix** | Combine the original or revised content with other material to create something new (e.g., incorporate the content into a mashup) |
| **Redistribute** | Share copies of the original content, your revisions, or your remixes with others (e.g., post a copy of the content online for others to download) |



# All OERS are not created equal

# What you need to look for:

Check to see what restrictions may inhibit modification of the item – CC-BY

- Contact the creator to see if there is a more accessible version

Check to see if there is an accessibility statement for the content

- Encourage OER creators to include these statements with the content they develop

Check to see if the item is reviewed for accessibility (several repositories such as the Open Textbook Library and Merlot include accessibility as part of their content review)

Examine it through different browsing scenarios to determine what possible problems can occur with the access of the content.

# Example of what to look for:

## American Environmental History

(1 review)

★★★★★

Dan Allosso

Pub Date: 2015

ISBN 13: 9781981731732

Publisher: Independent

Language: English

### Read this book

ONLINE

MULTIPLE FORMATS (PDF, KINDLE, E-PUB, .MOBI)

### Conditions of Use

Attribution-ShareAlike
CC BY-SA

### Reviews

Learn more about reviews.

★★★★★

Reviewed by Thomas Klinger, Professor, Bloomsburg University of Pennsylvania on 3/11/19

American Environmental History is an interesting amalgam of physical

### Table of Contents


- Chapter 1: Prehistory
- Chapter 2: Recontact
- Chapter 3: Colonial North America
- Chapter 4: Frontier and Grid
- Chapter 5: Commons, Mills, Corporations
- Chapter 6: Transportation Revolution
- Chapter 7: Commodities, Centers, Peripheries
- Chapter 8: Green Revolution
- Chapter 9: City Life
- Chapter 10: Wilderness and Country Life
- Chapter 11: Farmers and Agribusiness
- Chapter 12: Treasures Underground
- Chapter 13: Limits to Growth?
- Chapter 14: Economics and Externalities
- Chapter 15: Food and Choice


### About the Book

For too long the environment has been considered little more than a neutral background to history. This text surveys findings of the new field of Environmental History about how the environment of the Americas influenced the actions of people here and how people affected their environments, from prehistory to the present.

### About the Contributors

#### Author

**Dan Allosso**

# Tools to Address These Standards

WCAG 2.0 Checklist - https://www.wuhcag.com/wcag-checklist/

Online Course Accessibility Checklist - https://www.waynecc.edu/wp-content/uploads/vlcCourseAccListUpdated.pdf

Accessibility Checker - https://achecker.ca/checker/

NVDA Free Screen Reader - https://www.nvaccess.org/

Authoring Accessible OER content - http://oeraccess.merlot.org/authoring_oer/index.html

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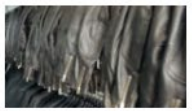

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# What to consider . . . .

What are the minimum technical requirements needed to access the materials?

- Some students may not have the most current applications of the software needed to access the content.

What versions can be made available to students? Is there a print version of the resource?

- Some students feel it is easier to work with print because they want to use the copies to add notes and highlight for studying.

Is there text identification of non-text elements?

- Text-to-speech screen readers for the blind can read alternative descriptions of items like images. For example, if you are making an OER using HTML, be sure to include the descriptions for images.
- A text version must provide the user with the same experience as an interactive asset.
- If the functionality behind the interactive OER  is required to ensure student learning outcomes are met, the functionality of the OER must be described in the text version.

# OERs and Accessible Media

| | Audio | Video | Video with Audio |
|---|---|---|---|
| Text Transcript | Yes | | Yes |
| Video Description | | Yes | Yes |
| Closed-Captioned | | | yes |

If you provide video without audio, you need to provide a video description. This is a text description of the key visual elements that are required to comprehend what's taking place in the video.

Alternatively, you could provide an audio recording of the video description to be played by a user with low or no vision.

If your video has audio, you must provide synchronized closed captions, the text transcript, and the video descriptions.

# What to consider . . . .

How does the OER embed into your courseware or web platform?

- Some OERs do not interact well with courseware packages and it may require a labor

Will the software used to view the OER disable the accessibility features of the computer's operating system (Windows, Mac OSX, Linux)?

- For varied reasons, some software disables operating system accessibility features, such as zoom, text-to-speech, and speech-to-text. Accessible OERs must avoid this software.

Is the software used to view the OER compatible with most assistive devices?

- There are computer peripherals, especially for the paralyzed, that function in ways outside of the normal keyboard and mouse.

# What to consider . .

## Is all text in the OER recognizable to a computer as text?

- For PDFs, accurate optical character recognition (OCR) is often required to make text understandable to a computer. Screen-readers and highlighters require textual information, like OCR, for all text displayed.

## Is the OER accessible by the colorblind?

- If you have color-dependent information, be sure that either alternative methods of recognition (such as differing patterns) are present, or that the color and contrast can be fully adjusted for the colorblind.

## Is the OER available in accessibility-focused formats?

- While not completely required due to the functionality of assistive devices and screen readers, editions of the OER translated to Braille or converted to the DAISY accessible format would help more people in understanding the resource.

# Adaptation – modify it

Add captions to embedded media

- Adding subtitles and closed captions to YouTube Videos –
- Link URL: https://support.google.com/youtube/answer/2734796?hl=en
- Vimeo:
- Vimeo Introducing the New Vimeo Player
- Link URL:https://vimeo.com/blog/post/introducing-the-new-vimeo-player

Create text alternatives for interactive assets

- A text version must provide the user with the same experience as an interactive asset.
- If the functionality behind the interactive OER  is required to ensure student learning outcomes are met, the functionality of the OER must be described in the text version.

# Additional Resources

Accessibility Essentials: The Complete Series - four guides designed to provide anyone preparing or using electronic documents with the essential information needed to do so in a more accessible way.

Creation of Learning Content - extensive advice and guidance for staff wanting to create effective, engaging and accessible learning materials.

Xerte Online Toolkit - an Open Source content creation tool that enables non-technical staff to create, publish and share rich, interactive and engaging resources with high levels of accessibility built in.

AccessApps - Over 50 free and Open Source Windows applications that can run from a memory stick to provide independent reading, writing and planning support to all learners accessing materials regardless of where they are.

Web2Access - a toolkit designed to assist users and developers in their understanding of an approach to reviewing the accessibility of web-based applications. A useful source for practitioners and developers to check the accessibility and usability of their own resources.

# Creating Captions and Transcripts

Provide captions or transcripts for video that you produce if it will be used for more than one term.

Set up an account in DCMP to get support for locate captioning videos http://www.captioningkey.org – The DCMP has a Media Library and Learning Center that provides access to captioned materials.

DCMP's "Caption it Yourself" https:///www.dcmp.org/ciy

BC Campus Accessibility Toolkit – https://open.bccampus.ca/find-open-textbooks/?subject=Toolkits

- The goal of the Accessibility Toolkit is to provide the resources needed so that each author, instructional designer, educational technologist, librarian, administrator, and teaching assistant can create a truly open and accessible textbook.

# DCMP Captioning Guidelines

https://www.3playmedia.com/resources/white-papers/wp-fcc/

The Described and Captioned Media Program (DCMP) provides guidelines consistent with the mandates by the FCC. These guidelines note the following elements of quality captioning:

**Accurate**: Errorless captions are the goal for each production.

**Consistent**: Uniformity in style and presentation of all captioning features is crucial for viewer understanding.

**Clear**: A complete textual representation of the audio, including speaker identification and non-speech information, provides clarity.

**Readable**: Captions are displayed with enough time to be read completely, are in synchronization with the audio, and are not obscured by (nor do they obscure) the visual content.

**Equal**: Equal access requires that the meaning and intention of the material is completely preserved.

https://www.merlot.org/merlot/materials.htm?category=673500

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Filter by Clear Filters

Discipline

Authoring (74)
Conversion (17)
**Evaluation** (104)

Material Type

Assessment Tool (84)

1-24 of 104 results for MERLOT Materials

## AChecker

AChecker is used to evaluate HTML content for accessibility problems by entering the location of a web page, uploading an... see more

**Material Type:** Reference Material
**Author:** Inclusive Design Research Centre
**Date Created:** October 12, 2012
**Date Modified:** September 15, 2013

## CSU Accessible Technology Initiative...

This is the portal of the Accessible Technology Initiative Community at the CSU. The mission of the ATI is for the CSU... see more

**Material Type:** Collection
**Author:** Assessible Technology Initiative
**Date Created:** June 14, 2010
**Date Modified:** November 28, 2017

## CSU Captioning Guidelines and...

The CSU Captioning Guidelines was developed as a collaborative effort among five CSU campuses and the Chancellor's Office... see more

**Material Type:** Assessment Tool
**Author:** Cheryl Pruitt
**Date Created:** July 28, 2016
**Date Modified:** September 7, 2016

## NCDAE Microsoft Word 2013

The National Center on Disability and Access to Education guidelines for increasing universal access to educational... see more

**Material Type:** Development Tool
**Author:** Project GOALS
**Date Created:** July 29, 2016
**Date Modified:** March 21, 2018

## A11Y Compliance Platform

Tool that is used to help reach and maintain website compliancy for accessibility and for the WCAG 2.0. This tool is used... see more

**Material Type:** Development Tool
**Author:** BoIA (Bureau of Internet Accessibility)
**Date Created:** August 4, 2016
**Date Modified:** August 4, 2016

Merlot Accessibility Project - http://oeraccess.merlot.org/
https://www.merlot.org/merlot/materials.htm?category=673500

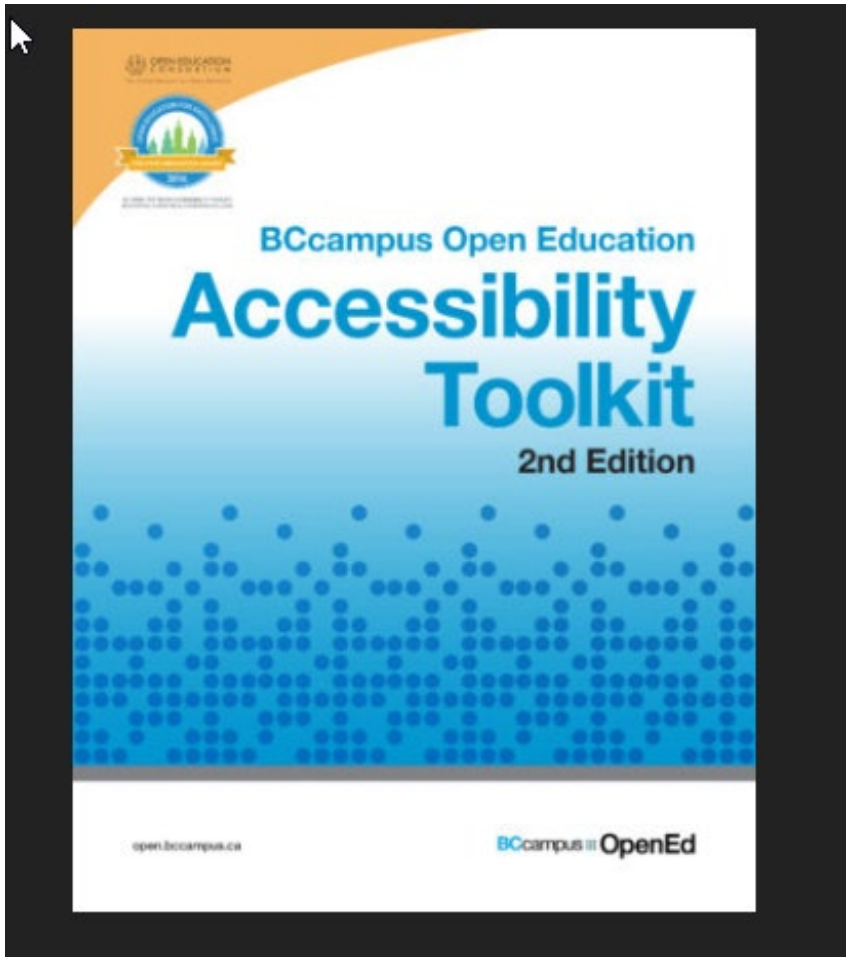
# Quality Matters Resources on Accessibility

(Barbara Frey, D.Ed. and Denise King 2011). Accessibility Policy Guidelines for Online Courses https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/accessibility-policy-guidelines

Quality Matters Research Library - https://www.qmprogram.org/qmresources/research/

Quality Matters Research Archives - https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/research-webinars-archive

Includes webinars, presentations, links, and numerous resources on accessibility, usability, and universal design for learning.




# Accessibility Guidelines

HTTPS://OPENTEXTBC.CA/ACCESSIBILITYTOOLKIT/

# How do you get started to find accessible OER content?

## Establish

With the support of existing EIT Accessibility policies and guidelines, establish protocols for the content you will curate for classroom instruction.  Create checklists.

## Partner

Partner with accessibility, IT and library staff to identify and build upon existing campus resources on accessibility.

- Help curate accessible online learning objects
- Understand the tools you have available and the tools you need

## Create

Create an accessibility resource page for educators

- Include accessibility statements, important contacts and links for students, and institution's accessibility resources
- TECH HUB - http://techhub.chemeketa.edu/web-accessibility/

http://techhub.chemeketa.edu/web-accessibility/

# Develop a “POUR” workshop series

Understandable

To make sure learners can understand your content and enjoy a predictable experience:

- Clarify expectations through clear directions and models
- Follow conventions to ensure a predictable and consistent experience
- Use plain language
- Indicate the language of your content

Robust

To ensure your content works well with current and future technologies:

- Add metadata to make content easier to find and use
- Perform an accessibility check
- Perform basic assistive technology testing

# Develop a “POUR” workshop series

## Perceivable

To make sure learners can see and hear your content:

- Add alternative text to images and other visuals
- Close caption videos or provide transcripts
- Provide sufficient color contrast between text and its background
- Make sure content does not rely on color alone

## Operable

To make sure learners can interact with your content with a variety of tools:

- Provide a clear structure with properly marked up headings
- Create descriptive links that make sense out of context
- Provide sufficient time for interaction and response
- Avoid content that can trigger seizures

# OERs and Pedagogic Accessibility

When OER are developed with a particular audience in mind pedagogical context might be incorporated within the OER or into the presentation of the OER (e.g. within a clear linear course structure). This can make OER less accessible to a wider audiences.

Presenting OER through different hosting mechanisms can improve accessibility - so OER can be made available through repositories in both smaller chunks or larger packages, or could be offered within a series of structured web pages or even as a part of a course (like in the Open University Labspace http://www.open.edu/openlearncreate/).

# When students curate OER content . . .

If students are required to use and review content to meet learning objectives,

**user-generated content must be accessible.**

# Issues to consider . . .

Understand the different uses and applications for open education resources.

Check to ensure that there are no copyright restrictions. Inclusive access is NOT open access material; someone must pay.

Make certain that the OER has a static link if there are revisions for the text.

CC-BY licensing is the best format for modification in your course.

Check accessibility features of the open education resource– (images, graphs, charts) – Are there accessible formats available? Is there an accessibility statement for the item?

Check to see if the OER integrates into the LMS Platform you are using.

Does it have any ancillary resources? Are they accessible?

# Let’s get to work together!

Start the transformation by working on the courses you teach. Look for ways to reduce the costs of the academic materials in your own courses by using accessible OERs.

Get involved in the Spectrum of Open Practice

## Adopt – Adapt – Create – Connect

When you meet with your academic unit to discuss the selection of instructional materials, lead the discussion to include accessible open education materials as an option.

Seek out others who are interested in OERs in your disciplinary area and work together to review, collaborate, and create materials that can expand the resources.

# The End

FOR MORE INFORMATION – MHRICKO@KENT.EDU

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