California Open Online Library for Education & Accessibility

COOL4Ed (the California Open Online Library for Education) was created so that faculty can easily find, adopt, utilize, review and/or modify free and open etextbooks for little or no cost. The COOL4Ed accessibility open textbook evaluations can inform faculty, staff, and students how the free and open etextbooks meet 15 accessibility "checkpoints" that could impact the learning of learners with a range of disabilities.

SUMMARY OF ACCESSIBILITY EVALUATION:

Textbook: **English Composition**
Format of Textbook: **HTML**

Assistive Technology (AT) Evaluation Score: Overall	6.5 (Maximum score = 10)
Assistive Technologies (AT) Evaluations applies specialized tools and software in the accessibility evaluation process. These specialized assistive technologies, see list below, are typically not used or available by the general public into the accessibility evaluation process. • Accessibility features of desktop operating systems (e.g. high-contrast display themes, settings from the Keyboard and Mouse control panels) • Accessibility-related software included with desktop operating systems (e.g. VoiceOver, Microsoft Narrator) • Third-party accessibility software and hardware: • Screen readers (e.g. JAWS, Window Eyes) • Magnification software (e.g. ZoomText Magnifier/Reader, MAGIC Pro with Speech) • Reading software for users with learning disabilities (e.g. Read and Write Gold, Kurzweil 3000) • Refreshable Braille displays	
Non- Assistive Technology (NAT) Evaluation Score: Overall	7.6 (Maximum score =10)
Non-Assistive Technologies (NAT) Evaluations applies only native or basic tools and software such as the keyboard and Narrator in the accessibility evaluation process. These non-assistive technologies are readily available and used by the general public.	

COOL4Ed Accessibility Evaluation Methods:

The California State University Accessible Technology Initiative and MERLOT (Multimedia Educational Resources for Learning and Online Teaching) developed the rubric or "checkpoints" for the accessibility evaluation. CAST, a nationally recognized organization with expertise in accessibility and UDL, reviewed and affirmed the appropriateness and value of the accessibility evaluation rubric and contributed the references and support resources to help people learn how best to design, evaluate, and remediate the learning materials to maximize the accessibility of the learning resources for all. The "checkpoints" have been built upon the Section 508 technical standards and has been organized and tailored to the typical characteristics of digital resources used in higher education courses.

The accessibility evaluations were performed by the Center for Usability in Design and Accessibility at California State University, Long Beach; faculty and graduate students with expertise in human factors, usability, and accessibility performed the evaluations of over 150 free and open etextbooks. COOL4ed.org has published the accessibility evaluation rubric and provides a detailed description of the methodology used to evaluate the accessibility of the etextbooks in COOL4ed.

LOOKING FOR DETAILED ACCESSIBILITY REPORTS?

See Detailed Accessibility Evaluation Report using Assistive Technologies

See Detailed Accessibility Evaluation Report using Non-Assistive Technologies

DETAILED ACCESSIBILITY EVALUATION REPORT using
Assistive Technologies

Assistive Technologies (AT) Evaluations applies specialized tools and software in the accessibility evaluation process.   These specialized assistive technologies, such as Kurzweil and NVDA, are typically not used or available by the general public into the accessibility evaluation process.

1. Accessibility Documentation

A. The organization providing the online materials has a formal accessibility policy.	**Pass**
Additional Information:	**www.csedu.com/documents/publications/csc_student_handbook.pdf**
B. The organization providing the online materials has an accessibility statement.	**Fail**
Additional Information:	**Did not find any information about Merlot's accessibility statement.**
C. An Accessibility Evaluation Report is available from an external organization.	**Fail**
Additional Information:	**Did not find any information about Merlot's accessibility evaluation report.**

2. Text Access

A. The text of the digital resource is available to assistive technology that allows the user to enable text-to-speech (TTS) functionality.	**Pass**
Additional Information:	**2/2 chapters were read properly (Start here, An Overview of the Writing Process). All of the normal text was read in logical order, however there were 4 images that were skipped while the textbook was read aloud.**

3. Text Adjustment

A. Text is compatible with assistive technology.	**Pass**

Additional Information:	**2/2 chapters (Start here, An Overview of the Writing Process) were able to zoom in and out properly without horizontal scrolling.**
B. The resource allows the user to adjust the font size and font/background color (or is rendered by an application such as a browser, media player, or reader) that offers this functionality).	**Pass**
Additional Information:	**2/2 chapters (Start here, An Overview of the Writing Process) were able to adjust the font and colors of the background and the normal text. However, the images did not change color.**

4. Reading Layout

A. Text of the digital resource is compatible with assistive technology that allows the user to reflow the text by specifying the margins and line spacing (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	**Pass**
Additional Information:	**30/30 web pages had text that reflowed properly into the next line.**
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	**N/A**
Additional Information:	

5. Reading Order

A. The reading order for digital resource content logically corresponds to the visual layout of the page when rendered by assistive technology.	**Fail**
Additional Information:	**0/5 webpages had digital resource layouts that were properly read aloud completely (Meet your Instructor, Video, Audio, and Screencast, Defining the Writing Process, Cause and Effect Essay: Final,**

	Argument Essay: Final). The normal text was was able to be read aloud with no problem. However, there were 3 figures and 2 tables that were not read a logical manner. One of the three figures was read in code, but not described in more detail other than the code. The other two images were skipped while read aloud, and all of the figures were not labeled properly as figures. The 2 tables were read cell by cell, however a reader with vision disabilities would not be able to go through each cell manually by pressing hotkeys.

6. Structural Markup/Navigation

A. The text of the digital resource includes markup (e.g. tags or styles) that allows for navigation by key structural elements (chapters, headings, pages) using assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	**Pass**
Additional Information:	**2/2 chapters were good for navigating through the text (Narrative Essay, Illustration/Example Essay). A person would be able to use just their hotkeys to navigate through the whole textbook.**
B. The text of the digital resource includes markup for bullets and numbered lists that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	**Fail**
Additional Information:	**6/10 lists are navigable using only NVDA hotkeys. The lists that were not read aloud by the NVDA program as lists were located in the Overview of the Writing Process and Narrative Essay chapters. The text of these lists could be read aloud, however they were not able to be navigated through item by item.**
C. If the text of the digital resource is delivered within an ebook reader application, a method	**N/A**

is provided that allows users to bypass the reader interface and move directly to the text content that is compatible with assistive technology.	
Additional Information:	

7. Tables

A. Data tables include markup (e.g. tags or styles) that identifies row and column headers in a manner that is compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).	**Fail**
Additional Information:	**5/10 tables were navigable by the NVDA program. However, NVDA was not able to navigate through the cells of the other tables by using arrow keys.**

8. Hyperlinks

A. In-book links take you to a location within the textbook. For example, the table of contents would be considered in-book links and embedded links take you to the correct location in the book.	**N/A**
Additional Information:	
B. Live hyperlinks take you to any website or webpages external to the book.	**Fail**
Additional Information:	**29/50 hyperlinks in the textbook were working properly. 21 of the other links were linked to pages that were not found or the website was unable to open the contents because of security problems. The 21 links that did not work were located in Chapters 2(1), 4(4), 5(3), 6(3), 7(2), 8(2), 9(1), and 10(5).**
C. Live links take you to the correct webpage that is functioning properly.	**Fail**

Additional Information:	**29/50 hyperlinks in the textbook were working properly. 21 of the other links were linked to pages that were not found or the website was unable to open the contents because of security problems. The 21 links that did not work were located in Chapters 2(1), 4(4), 5(3), 6(3), 7(2), 8(2), 9(1), and 10(5).**
D. Live links are descriptive enough for the users to know where it should take them.	**Pass**
Additional Information:	**50/50 links had good description of where the links would take the reader rather than just listing the URL of the link.**

9. Color and Contrast

A. All information within the material that is conveyed using color is also available in a manner that is compatible with those that do not perceive color, and information conveyed by color is also conveyed in other ways.	**Pass**
Additional Information:	**2/2 chapters had proper color redundancy (Chapters 6 and 9). The headings, text, and links were consistent in color redundancy.**
B. Information is conveyed from the sub-categories for contrast.	**Pass**
Additional Information:	**2/2 chapters (Chapters 8, 9) had good contrast. All text, headings, and links passed the contrast evaluation with the color contrast analyze.**
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	**Pass**
Additional Information:	**All headers throughout the book passed the color contrast analysis because the headings were black and the background was white.**
D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).	**Pass**

Additional Information:	**All text throughout the book passed the color contrast analysis because they were in black and white.**
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	**N/A**
Additional Information:	

10. Language

A. The text of the digital resource includes markup that declares the language of the content in a manner that is compatible with assistive technology.	**Pass**
Additional Information:	**The markup language is in English.**
B. If the digital resource includes passages in a foreign language, these passages include markup that declares the language in a manner that is compatible with assistive technology.	**N/A**
Additional Information:	

11. Images

A. Non-decorative images have alternative text that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	**Fail**
Additional Information:	**0/4 images that I found throughout the entire textbook were not read aloud by the NVDA program properly. Figures that were read aloud had the graphic codes read aloud by the NVDA program. There were images that were also skipped entirely without even the raphic organizer read aloud. These figures were also not labeled as images or figures in the actual text.**

B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.	**Pass**
Additional Information:	**The only decorative image that I found was read aloud properly and was not skipped by the NVDA program. However, the image was not labeled as a figure in the caption.**
C. Complex images, charts, and graphs have longer text descriptions that are compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader) that offers this functionality).	**Fail**
Additional Information:	**0/4 images that I found throughout the entire textbook were not read aloud by the NVDA program properly. Figures that were read aloud had the graphic codes read aloud by the NVDA program. There were images that were also skipped entirely without even the graphic organizer read aloud. These figures were also not labeled as images or figures in the actual text.**

12. Multimedia

A. A synchronized text track (e.g. open or closed captions) is provided with all video content.	**N/A**
Additional Information:	
B. A transcript is provided with all audio content.	**N/A**
Additional Information:	
C. Audio/video content is delivered via a media player that is compatible with assistive technology. This includes support for all criteria listed in Section 15 below.	**N/A**
Additional Information:	

13.Flickering

A. The digital resource content does not contain anything that flashes more than three times in any one-second period.	**Pass**
Additional Information:	**No flickering content**

14.Science, Technology, Engineering, and Math (STEM)

A. STEM figures have appropriate markup that indicates that the image is a figure.	**N/A**
Additional Information:	
B. STEM graphs have appropriate markup that indicates that the image is a graph.	**N/A**
Additional Information:	
C. STEM equations have appropriate markup that indicates that the image is an equation.	**N/A**
Additional Information:	
D. STEM tables have appropriate markup that indicates the image is a table.	**N/A**
Additional Information:	
E. STEM figures have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	**N/A**
Additional Information:	
F. STEM graphs have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	**N/A**
Additional Information:	
G. STEM equations have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	**N/A**

Additional Information:	
H. Assistive technology used can access the content from the STEM tables.	**N/A**
Additional Information:	

15.Interactive Elements

A. Each interactive element (e.g. menu, hyperlink, button) and function (e.g. annotations) allows keyboard-only operation both with and without assistive technology.	**N/A**
Additional Information:	
B. Each interactive element conveys information to assistive technology regarding the element's name, type, and status (e.g. "Play, button, selected").	**N/A**
Additional Information:	
C. All instructions, prompts, and error messages necessary to complete forms are conveyed as text to assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).	**N/A**
Additional Information:	

DETAILED ACCESSIBILITY EVALUATION REPORT using
Non-Assistive Technologies

Non-Assistive Technologies (NAT) Evaluations applies only native or basic tools and software such as the keyboard and Narrator in the accessibility evaluation process. These non-assistive technologies are readily available and used by the general public.

1. Accessibility Documentation

A. The organization providing the online materials has a formal accessibility policy.	**Pass**
Additional Information:	
B. The organization providing the online materials has an accessibility statement.	**Pass**
Additional Information:	
C. An Accessibility Evaluation Report is available from an external organization.	**Fail**
Additional Information:	

2. Text Access

A. The text of the digital resource is available to assistive technology that allows the user to enable text-to-speech (TTS) functionality.	**Pass**
Additional Information:	

3. Text Adjustment

A. Text is compatible with assistive technology.	**Pass**
Additional Information:	**Used Firefox**
B. The resource allows the user to adjust the font size and font/background color (or is rendered by an application such as a browser, media player, or reader) that offers this functionality).	**Pass**
Additional Information:	**Used Care Your Eyes for Chrome**

4. Reading Layout

A. Text of the digital resource is compatible with assistive technology that allows the user to reflow the text by specifying the margins and line spacing (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	**N/A**
Additional Information:	**No PDF/other reference.**
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	**N/A**
Additional Information:	

5. Reading Order

A. The reading order for digital resource content logically corresponds to the visual layout of the page when rendered by assistive technology.	**Pass**
Additional Information:	

6. Structural Markup/Navigation

A. The text of the digital resource includes markup (e.g. tags or styles) that allows for navigation by key structural elements (chapters, headings, pages) using assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	**Pass**
Additional Information:	
B. The text of the digital resource includes markup for bullets and numbered lists that is compatible with assistive technology (or is rendered by an application such as a browser,	**Pass**

media player, or reader that offers this functionality).	
Additional Information:	
C. If the text of the digital resource is delivered within an ebook reader application, a method is provided that allows users to bypass the reader interface and move directly to the text content that is compatible with assistive technology.	**N/A**
Additional Information:	

7. Tables

A. Data tables include markup (e.g. tags or styles) that identifies row and column headers in a manner that is compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).	**N/A**
Additional Information:	

8. Hyperlinks

A. In-book links take you to a location within the textbook. For example, the table of contents would be considered in-book links and embedded links take you to the correct location in the book.	**N/A**
Additional Information:	
B. Live hyperlinks take you to any website or webpages external to the book.	**Pass**
Additional Information:	
C. Live links take you to the correct webpage that is functioning properly.	**N/A**
Additional Information:	

D. Live links are descriptive enough for the users to know where it should take them.	N/A
Additional Information:	

9. Color and Contrast

A. All information within the material that is conveyed using color is also available in a manner that is compatible with those that do not perceive color, and information conveyed by color is also conveyed in other ways.	Pass
Additional Information:	
B. Information is conveyed from the sub-categories for contrast.	Pass
Additional Information:	Hyperlinks do not pass contrast criterion.
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	Pass
Additional Information:	
D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).	Pass
Additional Information:	
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	Pass
Additional Information:	Some contrast fails.

10. Language

A. The text of the digital resource includes markup that declares the language of the content in a manner that is compatible with assistive technology.	Pass
Additional Information:	
B. If the digital resource includes passages in a foreign language, these passages include	N/A

markup that declares the language in a manner that is compatible with assistive technology.	
Additional Information:	**All English.**

11.Images

A. Non-decorative images have alternative text that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	**Pass**
Additional Information:	**Adequate alt text.**
B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.	**Pass**
Additional Information:	**Little/no alt text.**
C. Complex images, charts, and graphs have longer text descriptions that are compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader) that offers this functionality).	**Pass**
Additional Information:	**None found.**

12.Multimedia

A. A synchronized text track (e.g. open or closed captions) is provided with all video content.	**Fail**
Additional Information:	**Youtube videos.**
B. A transcript is provided with all audio content.	**Fail**
Additional Information:	
C. Audio/video content is delivered via a media player that is compatible with assistive technology. This includes support for all criteria listed in Section 15 below.	**Fail**

Additional Information:	

13.Flickering

A. The digital resource content does not contain anything that flashes more than three times in any one-second period.	**Pass**
Additional Information:	**No flickering.**

14.Science, Technology, Engineering, and Math (STEM)

A. STEM figures have appropriate markup that indicates that the image is a figure.	**N/A**
Additional Information:	**No STEM.**
B. STEM graphs have appropriate markup that indicates that the image is a graph.	**N/A**
Additional Information:	**No STEM.**
C. STEM equations have appropriate markup that indicates that the image is an equation.	**N/A**
Additional Information:	**No STEM.**
D. STEM tables have appropriate markup that indicates the image is a table.	**N/A**
Additional Information:	
E. STEM figures have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	**N/A**
Additional Information:	**No STEM.**
F. STEM graphs have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	**N/A**
Additional Information:	**No STEM.**
G. STEM equations have appropriate notation markup that conveys both the notation	**N/A**

(presentation) and meaning (semantics) of the STEM content.	
Additional Information:	**No STEM.**
H. Assistive technology used can access the content from the STEM tables.	**N/A**
Additional Information:	

15.Interactive Elements

A. Each interactive element (e.g. menu, hyperlink, button) and function (e.g. annotations) allows keyboard-only operation both with and without assistive technology.	**N/A**
Additional Information:	
B. Each interactive element conveys information to assistive technology regarding the element's name, type, and status (e.g. "Play, button, selected").	**N/A**
Additional Information:	
C. All instructions, prompts, and error messages necessary to complete forms are conveyed as text to assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).	**N/A**
Additional Information:	

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