



## 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:** Reading for Philosophical Inquiry  
**Format of Textbook:** HTML

<b>Assistive Technology (AT) Evaluation Score: Overall</b>	<b>8.3 (Maximum score = 10)</b>
<p><b>Assistive Technologies (AT) Evaluations</b> 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.</p> <ul style="list-style-type: none"> <li>• Accessibility features of desktop operating systems (e.g. high-contrast display themes, settings from the Keyboard and Mouse control panels)</li> <li>• Accessibility-related software included with desktop operating systems (e.g. VoiceOver, Microsoft Narrator)</li> <li>• Third-party accessibility software and hardware:</li> <li>• Screen readers (e.g. JAWS, Window Eyes)</li> <li>• Magnification software (e.g. ZoomText Magnifier/Reader, MAGIC Pro with Speech)</li> <li>• Reading software for users with learning disabilities (e.g. Read and Write Gold, Kurzweil 3000)</li> <li>• Refreshable Braille displays</li> </ul>	
<b>Non- Assistive Technology (NAT) Evaluation Score: Overall</b>	<b>7.1 (Maximum score =10)</b>
<p><b>Non-Assistive Technologies (NAT) Evaluations</b> 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.</p>	



## **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.

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## **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.	<b>Fail</b>
Additional Information:	<b>Did not find any information about the reading's formal accessibility policy.</b>
B. The organization providing the online materials has an accessibility statement.	<b>Fail</b>
Additional Information:	<b>Did not find any information about the reading's accessibility statement.</b>
C. An Accessibility Evaluation Report is available from an external organization.	<b>Fail</b>
Additional Information:	<b>Did not find any information about the reading's accessibility evaluation report.</b>

### 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.	<b>Pass</b>
Additional Information:	<b>5/5 chapters had text that was properly read aloud (Ch. 6, 12, 18, 24, 30). All of the text was read in a logical order with no context skipped.</b>

### 3. Text Adjustment

A. Text is compatible with assistive technology.	<b>Pass</b>
Additional Information:	<b>5/5 chapters were able to properly adjust font size when zoomed in and out (Ch. 6, 12, 18, 24, 30). There</b>



	was no need for horizontal scrolling when zoomed in as well.
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:	5/5 chapters were able to properly adjust font colors and background colors using the Care Your Eyes program (Ch. 6, 12, 18, 24, 30). However, the a bit of the border on the right and bottom of the text content did not change background color, making it difficult to read a small portion of the texts. This occurred throughout all of the chapters, however it was only a very small portion in every page.

#### 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 webpages had proper reflow of text (Ch. 6(5), 12(5), 18(5), 24(5), 30(5), 32(5)).
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	Pass
Additional Information:	30/30 webpages had matching content and reflow of text with the printed material (Ch. 6(5), 12(5), 18(5), 24(5), 30(5), 32(5)).

#### 5. Reading Order

A. The reading order for digital resource content logically corresponds to the visual layout of	Pass
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the page when rendered by assistive technology.	
Additional Information:	<b>5/5 pages had text that was properly read aloud (Ch. 6, 12, 18, 24, 30). All of the text was read in a logical order with no context skipped. Even around images, the text read in a logical order that was easy to follow and understand.</b>

### **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).	<b>Pass</b>
Additional Information:	<b>5/5 chapters had proper structural markup and was navigable using the NVDA hotkeys (Ch. 6, 12, 18, 24, 30). All of the headers, links, and tables were properly navigable.</b>
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).	<b>Pass</b>
Additional Information:	<b>10/10 lists had proper structural markup and was navigable using the NVDA hotkeys (Ch. 6(3), 12, 18(2), 24, 29, 30, 32).</b>
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.	<b>N/A</b>
Additional Information:	<b>Not using eReader application.</b>



## 7. Tables

<p>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).</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>Only one table was found. 1/1 table had proper markup and was read aloud cell by cell (Ch. 6). However, the cells could only be read from left to right rather than in all directions using the directional keys.</b></p>

## 8. Hyperlinks

<p>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.</p>	<p><b>N/A</b></p>
<p>Additional Information:</p>	<p><b>All hyperlinks are live.</b></p>
<p>B. Live hyperlinks take you to any website or webpages external to the book.</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>49/50 hyperlinks had proper functionality and connected to the websites that the links were connected to (Ch. 6(7), 12(16), 18(6), 24(4), 29(6), 30(6), 32(4)). The remaining link, however, was not found on the internet (Ch. 6). 50/50 hyperlinks had proper description (Ch. 6(8), 12(16), 18(6), 24(4), 29(6), 30(6), 32(4)).</b></p>
<p>C. Live links take you to the correct webpage that is functioning properly.</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>49/50 hyperlinks had proper functionality and connected to the websites that the links were connected to (Ch. 6(7), 12(16), 18(6), 24(4), 29(6), 30(6), 32(4)). The remaining link, however, was not found on the internet (Ch. 6).</b></p>



D. Live links are descriptive enough for the users to know where it should take them.	Pass
Additional Information:	50/50 hyperlinks had proper description (Ch. 6(8), 12(16), 18(6), 24(4), 29(6), 30(6), 32(4)).

### 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:	5/5 chapters had consistent color redundancy (Ch. 6, 12, 18, 24, 30). Headers were consistently black, links were consistently blue, and normal text was consistently black against a white background.
B. Information is conveyed from the sub-categories for contrast.	Pass
Additional Information:	Headers were black against a white background. Normal text was black and links were blue against a white background. Simple images were mostly black and white.
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	Pass
Additional Information:	Headers were black against a white background.
D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).	Pass
Additional Information:	Normal text was black and links were blue against a white background.
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	Pass
Additional Information:	Simple images were mostly black and white.



### 10. Language

<p>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.</p>	<p><b>Fail</b></p>
<p>Additional Information:</p>	<p><b>Language markup not stated.</b></p>
<p>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.</p>	<p><b>N/A</b></p>
<p>Additional Information:</p>	<p><b>No passage markup.</b></p>

### 11. Images

<p>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).</p>	<p><b>Fail</b></p>
<p>Additional Information:</p>	<p><b>0/5 chapters had non-decorative images that were properly described by the NVDA reader (Ch. 6, 12, 18, 24, 30). The images were skipped and not described by the NVDA reader. The only description of the images that were available were the captions, which only said what were in the images but did not describe what the images looked like.</b></p>
<p>B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.</p>	<p><b>N/A</b></p>
<p>Additional Information:</p>	<p><b>No decorative images found.</b></p>
<p>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).</p>	<p><b>Fail</b></p>



Additional Information:	<b>0/5 chapters had complex images that were properly described by the NVDA reader (Ch. 18, 24, 27, 28, 30). The images were skipped and not described by the NVDA reader. The only description of the images that were available were the captions, which only said what were in the images but did not describe what the images looked like.</b>
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### **12. Multimedia**

A. A synchronized text track (e.g. open or closed captions) is provided with all video content.	<b>N/A</b>
Additional Information:	<b>No multimedia content found.</b>
B. A transcript is provided with all audio content.	<b>N/A</b>
Additional Information:	<b>No multimedia content found.</b>
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.	<b>N/A</b>
Additional Information:	<b>No multimedia content found.</b>

### **13. Flickering**

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

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

A. STEM figures have appropriate markup that indicates that the image is a figure.	<b>N/A</b>
Additional Information:	<b>No STEM content found.</b>
B. STEM graphs have appropriate markup that indicates that the image is a graph.	<b>N/A</b>
Additional Information:	<b>No STEM content found.</b>



C. STEM equations have appropriate markup that indicates that the image is an equation.	N/A
Additional Information:	No STEM content found.
D. STEM tables have appropriate markup that indicates the image is a table.	N/A
Additional Information:	No STEM content found.
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 content found.
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 content found.
G. STEM equations have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	N/A
Additional Information:	No STEM content found.
H. Assistive technology used can access the content from the STEM tables.	N/A
Additional Information:	No STEM content found.

### ***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:	No interactive elements found.
B. Each interactive element conveys information to assistive technology regarding the	N/A



element's name, type, and status (e.g. "Play, button, selected").	
Additional Information:	<b>No interactive elements found.</b>
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).	<b>N/A</b>
Additional Information:	<b>No interactive elements found.</b>

## 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.	<b>Fail</b>
Additional Information:	<b>Not found.</b>
B. The organization providing the online materials has an accessibility statement.	<b>Fail</b>
Additional Information:	<b>Not found.</b>
C. An Accessibility Evaluation Report is available from an external organization.	<b>Fail</b>
Additional Information:	<b>Not found.</b>



## 2. Text Access

<p>A. The text of the digital resource is available to assistive technology that allows the user to enable text-to-speech (TTS) functionality.</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>6/6 chapters worked. Homepage, 1, 6, 15, 27, 32 chapters were analyzed. All chapters worked with the text to speech function on Google Chrome. However in all chapters, the tables of the contents is skipped and goes directly to the text. If you specifically select the table of contents it the text to speak function will work.</b></p>

## 3. Text Adjustment

<p>A. Text is compatible with assistive technology.</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>6/6 chapters worked. 1, 6, 15, 27, 32 chapters were analyzed and all passed.</b></p>
<p>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).</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>6/6 chapters worked. 1, 6, 15, 27, 32 chapters were analyzed and all passed.</b></p>

## 4. Reading Layout

<p>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).</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>29/30 chapters worked. Homepage &amp; chapters 1-19 were checked. HTML pages for chapters 1-29 reflow. The Homepage does not reflow when making the window smaller.</b></p>



<p>B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>1-30 chapters were checked and compared with the PDF version. On the HTML to a specific chapter there a sublinks which lead the same content found on the PDF version.</b></p>

### 5. Reading Order

<p>A. The reading order for digital resource content logically corresponds to the visual layout of the page when rendered by assistive technology.</p>	<p><b>N/A</b></p>
<p>Additional Information:</p>	<p><b>Non-Assistive Techonology Only.</b></p>

### 6. Structural Markup/Navigation

<p>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).</p>	<p><b>N/A</b></p>
<p>Additional Information:</p>	<p><b>Non-Assistive Techonology Only.</b></p>
<p>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).</p>	<p><b>N/A</b></p>
<p>Additional Information:</p>	<p><b>Non-Assistive Techonology Only.</b></p>
<p>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</p>	<p><b>N/A</b></p>



content that is compatible with assistive technology.	
Additional Information:	<b>Non-Assistive Techonology Only.</b>

### 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).	<b>N/A</b>
Additional Information:	<b>Non-Assistive Techonology Only.</b>

### 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.	<b>N/A</b>
Additional Information:	<b>HTML document only contains live link, no inbook links available.</b>
B. Live hyperlinks take you to any website or webpages external to the book.	<b>Pass</b>
Additional Information:	<b>Average Score</b>
C. Live links take you to the correct webpage that is functioning properly.	<b>Pass</b>
Additional Information:	<b>20/20 links worked. Home page and Chapter 1 checked. Google Chrome.</b>
D. Live links are descriptive enough for the users to know where it should take them.	<b>Pass</b>
Additional Information:	<b>20/20 links. Home page and Chapter 1 checked. Google Chrome.</b>



## 9. Color and Contrast

<p>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.</p>	
<p>Additional Information:</p>	<p><b>6/6 pages passed. 1, 6, 15, 27, 32 chapters were analyzed and all passed. Links which were a different color were all underlined.</b></p>
<p>B. Information is conveyed from the sub-categories for contrast.</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>Average Score</b></p>
<p>C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>6/6. Homepage, 1, 6, 15, 27, 32 chapters were checked. In the home page the header is blue aqua background and gray text. In other chapters the it the white background and black text.</b></p>
<p>D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).</p>	<p><b>Pass</b></p>
<p>Additional Information:</p>	<p><b>6/6. Homepage, 1, 6, 15, 27, 32 chapters were checked. All chapters had a body which had a white background and black text.</b></p>
<p>E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).</p>	<p><b>N/A</b></p>
<p>Additional Information:</p>	<p><b>No simple images found.</b></p>

## 10. Language

<p>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.</p>	<p><b>Fail</b></p>
<p>Additional Information:</p>	<p><b>0/6 chapters. Home, 11, 27, 12, 13, 23 were checked. None had a declared language.</b></p>



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:	<b>No other language found.</b>

### 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).	<b>Fail</b>
Additional Information:	<b>0/5 images passed. Home page, 1, 2, 3, 4 chapters were checked. No images had an alt tags.</b>
B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.	<b>Fail</b>
Additional Information:	<b>0/2 images passed. Home page, 1, 2, 3, 4 chapters were checked. No images had an alt tags.</b>
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).	N/A
Additional Information:	<b>No Complex images were found. Home page, 1, 2, 3, 4 chapters were checked. No images had an alt tags.</b>

### 12.Multimedia

A. A synchronized text track (e.g. open or closed captions) is provided with all video content.	N/A
Additional Information:	<b>No multimedia found.</b>
B. A transcript is provided with all audio content.	N/A



Additional Information:	<b>No multimedia found.</b>
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.	<b>N/A</b>
Additional Information:	<b>No multimedia found.</b>

### ***13.Flickering***

A. The digital resource content does not contain anything that flashes more than three times in any one-second period.	<b>Pass</b>
Additional Information:	<b>No flickering. Home page and Chapters 1-18 checked. Google Chrome.</b>

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

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



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 graphs found.
G. STEM equations have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	N/A
Additional Information:	No STEM equations found.
H. Assistive technology used can access the content from the STEM tables.	N/A
Additional Information:	No STEM tables found.

### ***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:	No interactive elements content in the book.
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:	No interactive elements content in the book.
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:	No interactive elements content in the book.



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