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: **Introduction to Sociology (WikiBooks)**
Format of Textbook: **HTML**

Assistive Technology (AT) Evaluation Score: Overall	8.0 (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	7.5 (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.	**Fail**
Additional Information:	**No URL found. Google Chrome.**
B. The organization providing the online materials has an accessibility statement.	**Fail**
Additional Information:	**No URL found. Google Chrome.**
C. An Accessibility Evaluation Report is available from an external organization.	**Fail**
Additional Information:	**No URL found. Google Chrome.**

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:	**5/5 pages. Google Chrome and NVDA. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked.**

3. Text Adjustment

A. Text is compatible with assistive technology.	**Pass**
Additional Information:	**5/5 pages. Google Chrome. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked.**
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,	**Pass**

media player, or reader) that offers this functionality).	
Additional Information:	**5/5 pages. Google Chrome and Care your Eyes add-on. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked.**

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:	**5/5 pages. Google Chrome. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked. Note: when using a 2-in-1 tablet/notebook, using gesture controls to zoom in and out of the web pages (i.e., by "pinching" the page), reflow does not occur. Note: when zooming in, the content reflows and the vertical scroll bar is consequently lengthened. Once the content is zoomed back out, this scroll bar does not follow suit and a large section of blank space is left below the content that can be scrolled through. It does not hinder the content (since the blank space is below the content) and does not affect NVDA, so it is not counted against the web pages.**
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	**Fail**
Additional Information:	**Google Chrome. Printed version is one long, single web page not separated into pages.**

5. Reading Order

A. The reading order for digital resource content logically corresponds to the visual layout of	**Pass**

the page when rendered by assistive technology.	
Additional Information:	**5/5 pages. Google Chrome and NVDA. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked.**

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:	**5/5 pages. Google Chrome and NVDA. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked.**
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).	**Pass**
Additional Information:	**48/48 lists. Google Chrome and NVDA. Introduction to Sociology (18/18), Sociological Methods (13/13), Society (10/10), and Economy (7/7) checked. Some "lists" don't seem like they should be lists (e.g., "Create Account" and "Log in" at the top-right corner of each page is listed in HTML code).**
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:	**eReader application not used.**

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:	**No tables found. Google Chrome and NVDA. Introduction to Sociology, Society, and Socialization checked. Some tables should not be tables and are used more for convenient aesthetics (e.g., the printable version and pdf links to the right in "Introduction to Sociology" are two rows within a one-column table). No instances of actual tables used for the "correct purpose" found and could not be rated.**

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:	**Skipped**
B. Live hyperlinks take you to any website or webpages external to the book.	**Pass**
Additional Information:	**Averaged score.**
C. Live links take you to the correct webpage that is functioning properly.	**Pass**
Additional Information:	**172/175 links. Google Chrome. Introduction to Sociology (42), Sociological Methods (90), Society (40/43), checked. In "Society", two links lead to wikipedia pages that said there existed no wikipedia page with the exact URL in the hyperlink. There was also a link in the same section that lead the user to a**

	page (http://www.fas.usda.gov/currwmt.html) that did not exist on that domain.
D. Live links are descriptive enough for the users to know where it should take them.	**Pass**
Additional Information:	**175/191 links. Google Chrome and NVDA. Introduction to Sociology (42/54), Sociological Methods (90/94), and Society (43/43) checked. Most links are just the titles of the sections they lead to, but in those cases, they are adequate. Each superscript number link to a footnote/reference is narrated solely as a number, which is insufficient information. In "Society", several links to wikipedia pages of different peoples (e.g., the Massai, the Bedouin, etc.) contain the tag attribute "title='w:...'", which may have been a note to the coder that the link was to a wikipedia page. This title is read by NVDA at the end of every link and it may not be intuitive to either understand the significance of "w:". The content within the <a> tag is already read by NVDA and adequately describes the page the link leads the user to, making the title even less useful.**

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.	**Fail**
Additional Information:	**0/217 links. Google Chrome. Introduction to Sociology (42 links), Sociological Methods (90), Society (43 links and 1 illustration) checked. All links are blue but without underline, including the sidebar on the left of every page (41 links). In "Society", a color-coded map of the United States illustrating the amount of land dedicated to agriculture in each state is provided and the information is almost entirely dependent on color alone.**

B. Information is conveyed from the sub-categories for contrast.	**Pass**
Additional Information:	**Averaged score.**
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	**Pass**
Additional Information:	**5/5 pages. Google Chrome and Colour Contrast Analyser. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked. Headers are all black on white.**
D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).	**Pass**
Additional Information:	**5/5 pages. Google Chrome and Colour Contrast Analyser. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked. Text is either black on white or blue on white (links).**
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	**Fail**
Additional Information:	**2/5 images. Google Chrome and Colour Contrast Analyser. Sociological Methods (2), Society (3) checked. The text in simple images pass the color contrast criteria. In "Society", the pie chart, U.S. map, and flow charts shown contain insufficient color contrast between adjacent colors in the figures.**

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:	**5/5 pages. Google Chrome. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked.**
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:	**No foreign language passages found.**

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:	**1/5 images. Google Chrome and NVDA. Sociological Methods (1/2), Society (3) checked. In Sociological Methods, both of the images found have their URLs narrated when hovered or read over. However, the image covering correlation versus causation, the captioning below the image has enough information to make up for the lack of alternate text within the image's HTML code. In the case of the other image (Milgram Experiment), the captioning is not sufficient. In "Society", the images' URLs that are read by NVDA are so long that it becomes a problem. Each image, regardless of whether or not they have proper captioning, will be listed as "failed" if their URLs are read by NVDA.**
B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.	**Fail**
Additional Information:	**0/7 images. Google Chrome and NVDA. Society (5) and Socialization (2) checked. As mentioned above, the URLs are read in addition to whatever captioning each image may have been given. The URLs are long and uninformative, leading to a non-passing score for each image.**
C. Complex images, charts, and graphs have longer text descriptions that are compatible with assistive technology (or are rendered by	**Fail**

an application such as a browser, media player, or reader) that offers this functionality).	
Additional Information:	**1/6 images. Google Chrome and NVDA. Society (0/3) and Economy (1/3) checked. The pie chart in "Society" has the beginnings of good alternate text within its HTML, but stops short. It is given a title but no supplemental information describing the purpose or content of the chart. The U.S. map figure contains a lengthy URL for alternate text in HTML with no value. Hovering over the flow chart detailing the stages of societal development does not make NVDA read the images' alternate text; rather, the paragraph in the section that the chart belongs to is read instead. In "Economy" the illustration demonstrating how capitalists generate profit actually does have descriptive alternate text. It still has its URL read, however, but the effort and thought put into actually giving the image descriptive alternate text makes the image worthy of a "pass".**

12. Multimedia

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

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:	**5/5 pages. Google Chrome. Introduction to Sociology, Sociological Methods, Society, Socialization, and Economy checked.**

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 content found.**
B. STEM graphs have appropriate markup that indicates that the image is a graph.	**N/A**
Additional Information:	**No STEM content found.**
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	**N/A**

(presentation) and meaning (semantics) of the STEM content.	
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 element's name, type, and status (e.g. "Play, button, selected").	**N/A**
Additional Information:	**No interactive elements found.**
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 found.**

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.	**Fail**
Additional Information:	**No content found.**
B. The organization providing the online materials has an accessibility statement.	**Fail**
Additional Information:	**No content found.**
C. An Accessibility Evaluation Report is available from an external organization.	**Fail**
Additional Information:	**No content found.**

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:	
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:	

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:	
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	**Pass**
Additional Information:	**No page numbers in HTML version.**

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).	**Pass**
Additional Information:	**None**

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.	**Pass**
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:	Graphs and figures use some unsatisfactory colors.
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).	Fail
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:	
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:	**No foreign languages.**

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:	**No alt text.**
B. Decorative images are marked with null alternative text or contain markup that allows them to be ignored by assistive technology.	**Pass**
Additional Information:	**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).	**Fail**
Additional Information:	**No alt text.**

12. Multimedia

A. A synchronized text track (e.g. open or closed captions) is provided with all video content.	**N/A**
Additional Information:	**None**
B. A transcript is provided with all audio content.	**N/A**
Additional Information:	**None**
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:	**None**

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:	**None**

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

A. STEM figures have appropriate markup that indicates that the image is a figure.	**Fail**
Additional Information:	**Image class.**
B. STEM graphs have appropriate markup that indicates that the image is a graph.	**Fail**
Additional Information:	**Image class.**
C. STEM equations have appropriate markup that indicates that the image is an equation.	**Pass**
Additional Information:	**None**
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.	**Fail**
Additional Information:	
F. STEM graphs have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	**Fail**
Additional Information:	
G. STEM equations have appropriate notation markup that conveys both the notation	**Pass**

(presentation) and meaning (semantics) of the STEM content.	
Additional Information:	**None**
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:	