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: **FSI – Spanish Programmatic Course**
Format of Textbook: **PDF**

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	2.5 (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:	**Did not find any information about Merlot's formal accessibility policy.**
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.	**Fail**
Additional Information:	**1/5 pages were properly read aloud by the NVDA reader (Pg. 301). Content in this page was in a logical order that was easy to follow. However, the remaining four pages had text in parentheses in side margins that were skipped and content that was not read in a logical order such that content was written in columns but the NVDA reader read across the columns as if it were a continuous sentence and not in numerical order.**

3. Text Adjustment

A. Text is compatible with assistive technology.	**Pass**
Additional Information:	**5/5 pages had proper adjustment of the size of text (Pg. 18, 301, 303, 305, 500). Text was able to proper zoom in and out, however, the reader had to horizontally scroll in order to read all of the content on the screen.**
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).	**Fail**
Additional Information:	**0/5 pages had proper adjustment of font and colors (Pg. 18, 301, 303, 305, 500). None of the pages changed font or background color, it just remained black and white.**

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 had proper reflow of text (Pg. 18, 301, 303, 305, 500) because the reflow of the text was not adjusted when zoomed in or out.**
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	**N/A**
Additional Information:	**No printed version available.**

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:	**4/5 pages had proper reading order of the textbook content (Pg. 18, 301, 305, 500). Content in these pages are read in a logical order that was easy to understand. There is some content in parentheses that are skipped, but despite the content that is skipped the rest of the content not in parentheses is read in a logical order. The remaining fifth page was not read in a logical order, content was written in columns but the NVDA reader read the content across the columns as if it were a continuous sentence (Pg. 303).**

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).	**Fail**
Additional Information:	**0/31 pages were properly navigable using the NVDA hotkeys (Pg. 14-26(12), 301-325(15), 500-502(4)). No headers, lists, links or tables were found when using the NVDA hotkeys.**
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:	**0/10 lists were properly marked up and found by the NVDA reader hotkeys (Pg. 14-17(4), 26, 301-304(2), 500-502(3)). When using the NVDA hotkeys, the NVDA reader stated "no next list."**

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:	**Not using eReader application.**

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.**

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:	**No hyperlinks found.**
B. Live hyperlinks take you to any website or webpages external to the book.	**N/A**
Additional Information:	**No hyperlinks found.**
C. Live links take you to the correct webpage that is functioning properly.	**N/A**
Additional Information:	**No hyperlinks found.**
D. Live links are descriptive enough for the users to know where it should take them.	**N/A**
Additional Information:	**No hyperlinks found.**

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:	**31/31 pages had consistent color redundancy. Header and text are consistently black against a white background (Pg. 1-20, 300-325, 500-525).**
B. Information is conveyed from the sub-categories for contrast.	**Pass**
Additional Information:	**31/31 pages had proper color contrast (Pg. 1-20, 300-325, 500-525). Headers are black against a white background. Text is black against a white background. No simple images were found.**
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	**Pass**
Additional Information:	**Headers are 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:	**Text is black against a white background.**
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	**N/A**
Additional Information:	**No simple images found.**

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.	**N/A**
Additional Information:	**Do not have Adobe Pro/Complete version.**
B. If the digital resource includes passages in a foreign language, these passages include markup that declares the language in a	**N/A**

manner that is compatible with assistive technology.	
Additional Information:	**Do not have Adobe Pro/Complete version.**

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).	**N/A**
Additional Information:	**No images found.**
B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.	**N/A**
Additional Information:	**No images found.**
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:	**No images found.**

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 content found.**
B. A transcript is provided with all audio content.	**N/A**
Additional Information:	**No multimedia content 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 content 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:	**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:	**No STEM content.**
B. STEM graphs have appropriate markup that indicates that the image is a graph.	**N/A**
Additional Information:	**No STEM content.**
C. STEM equations have appropriate markup that indicates that the image is an equation.	**N/A**
Additional Information:	**No STEM content.**
D. STEM tables have appropriate markup that indicates the image is a table.	**N/A**
Additional Information:	**No STEM content.**
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.**
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.**
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.**
H. Assistive technology used can access the content from the STEM tables.	**N/A**
Additional Information:	**No STEM content.**

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.	**Fail**
Additional Information:	**Pgs 15-20 were checked. The text is not available to assistive technology. The reader said "empty page."**

3. Text Adjustment

A. Text is compatible with assistive technology.	**Fail**
Additional Information:	**Pgs 15-20 were checked. When the window page chaged in size, a horizontal bar appeared. The font size of all pages checked could not be adjusted.**
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,	**Fail**

media player, or reader) that offers this functionality).	
Additional Information:	**Pgs 15-20 were checked. When changing the font/background color to green text on black, the background color did not change to black, and the font color did not change to green.**

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).	**Fail**
Additional Information:	**Pgs 15-20 were checked. I was not able to reflow the text. The text to speech function did not read the text.**
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	**N/A**
Additional Information:	**Need additional information. We do not have printed material to compare it too.**

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:	**Pgs 15-20 were checked. The text is not available to assistive technology. The reader said "empty page." Therefore the reading order could not be checked.**

6. Structural Markup/Navigation

A. The text of the digital resource includes markup (e.g. tags or styles) that allows for	**Fail**

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).	
Additional Information:	**No method provided that allows user to bypass sections of text. The Title, Bookmarks and Headings all passed using the accessibility checker. Tagged PDF failed.**
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:	**No markup provided that allows user to bypass sections of text. The Title, Bookmarks and Headings all passed using the accessibility checker. Tagged PDF failed.**
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:	**No additional eReader 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).	**Fail**
Additional Information:	**Tables were on pages 49, 52, 58, 60, 67. They were not compatible with assisitve technology as was the entire book. The tables did not have any markups**

	that identified them as tables. Using the accessibility checker, the rows, TH and TD, headers and regularity all failed.

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:	**No within book hyperlinks were found.**
B. Live hyperlinks take you to any website or webpages external to the book.	**N/A**
Additional Information:	**No live on internet links were found.**
C. Live links take you to the correct webpage that is functioning properly.	**N/A**
Additional Information:	**No live on internet links were found.**
D. Live links are descriptive enough for the users to know where it should take them.	**N/A**
Additional Information:	**No live on internet links were found.**

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:	**Pgs 15-71 were checked. Information not conveyed by color alone. Style of font (underlined versus non-underlined), and type of font (Bold versus Non-Bold font) were used. The chapter headings were in black font, and were underlined.**
B. Information is conveyed from the sub-categories for contrast.	**Pass**

Additional Information:	**Pgs 15-71 were checked. Most pages had the contrast ratio of 4.51:1 and above (10.21:1). Unit headings passed with 12.63:1.**
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	**Pass**
Additional Information:	**Pgs 15-71 were checked. There were different types of headers found throughout the pages checked. Unit headings passed with a ratio of 12.63:1 . Page headers passed with a 17.93:1 ratio.**
D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).	**Pass**
Additional Information:	**Pgs 15-71 were checked. Most of the text was above the ratio 4.51:1 (10.21:1).**
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	**Fail**
Additional Information:	**Pgs 40-96 were checked. Simple images included tables and that ratio of these images were 3.95:1 which failed.**

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.	**Fail**
Additional Information:	**Using the accessiblity checker the primary language failed.**
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.	**Fail**
Additional Information:	**Using the accessiblity checker the primary language failed.**

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).	**N/A**
Additional Information:	**No Non-Decorative Images found.**
B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.	**N/A**
Additional Information:	**No Decorative images found.**
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:	**0/10 images included descriptions that were compatible with assistive technology. Pgs 40, 41, 49, 52, 58, 60, 67, 73, 81, and 86 all had complex images and were checked.**

12.Multimedia

A. A synchronized text track (e.g. open or closed captions) is provided with all video content.	**N/A**
Additional Information:	**No content found.**
B. A transcript is provided with all audio content.	**N/A**
Additional Information:	**No content 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 content 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:	**Pgs 1-10 were checked. No flickering content was observed. Using the accessibility checker, screen flicker passed.**

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 Figures were found.**
B. STEM graphs have appropriate markup that indicates that the image is a graph.	**N/A**
Additional Information:	**No Graphs were found.**
C. STEM equations have appropriate markup that indicates that the image is an equation.	**N/A**
Additional Information:	**No Equations found.**
D. STEM tables have appropriate markup that indicates the image is a table.	**N/A**
Additional Information:	**No Tables were 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 Figures were 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 Graphs were 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 Equations found.**
H. Assistive technology used can access the content from the STEM tables.	**N/A**
Additional Information:	**No tables were 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 Present.**
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 Present.**
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 Present.**