

VPAT Accessibility Conformance Report

(Based on ITI VPAT®)

Name of Product	Shadow Health Lab Web
Date Last Updated	July 20, 2026
Completed by	Jay Nemchik (Elsevier Digital Accessibility Team)
Applicable Standards/Guidelines	This document rates Shadow Health Lab Web according to the W3C WCAG 2.2 A and AA requirements.
Contact for More Information	Elsevier Digital Accessibility Team accessibility@elsevier.com
Testing Tools and Methods	• Hands-on keyboard operation • DevTools/Code inspection • Mozilla Firefox 128 and Chrome 124 on Windows 11 23H2 • NVDA screen reader 2023.3 • WAVE Browser Extension • Color Contrast Analyzer • W3C Web Accessibility Initiative (WAI) Pages • Elsevier Accessibility Checklist
Document Sections	This review document includes all WCAG 2.2 A and AA checkpoints, organized into 7 logical sections: • Visuals • Keyboard • Headings and Structure • Labeling • Multimedia • Usability • Mobile User Experience
Pages Covered	Header, Side Navigation, Footer, Course Plan, Edit/Add Assignment, Resources & eBooks, Reading Assignments, Module Preview, Simulation Exercise, Assignment Report
Terms	• Supports: The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation. • Partially supports: Some functionality of the product does not meet the criteria. • Does not support: Majority of functionality of the product does not meet the criteria. • Supports (N/A): According to W3C on conformance, "If there is no content to which a success criterion applies, the success criterion is satisfied."
Notes/Terminology	• "AT" stands for Assistive Technology such as screen readers, voice input, etc. • The "Web" portion of Shadow Health Lab refers to the webpages that students or instructors will use outside of the simulations themselves.

Conformance Summary

WCAG 2.2 Success Criterion	Level	Evaluation
1.1.1: Non-text Content	A	Partially supports
1.2.1: Audio-only and Video-only (Prerecorded)	A	Supports (N/A)
1.2.2: Captions (Prerecorded)	A	Supports (N/A)
1.2.3: Audio Description or Full Text Alternative	A	Supports (N/A)
1.2.4: Captions (Live)	AA	Supports (N/A)
1.2.5: Audio Description	AA	Supports (N/A)
1.3.1: Info and Relationships	A	Partially supports
1.3.2: Meaningful Sequence	A	Supports
1.3.3: Sensory Characteristics	A	Supports
1.3.4: Orientation (2.1)	AA	Supports
1.3.5: Identify Input Purpose (2.1)	AA	Supports (N/A)
1.4.1: Use of Color	A	Partially supports
1.4.2: Audio Control	A	Supports (N/A)
1.4.3: Contrast (Minimum)	AA	Partially supports
1.4.4: Resize text	AA	Supports
1.4.5: Images of Text	AA	Partially supports
1.4.10: Reflow (2.1)	AA	Partially supports
1.4.11: Non-Text Contrast (2.1)	AA	Supports
1.4.12: Text Spacing (2.1)	AA	Partially supports
1.4.13: Content on Hover or Focus (2.1)	AA	Supports (N/A)
2.1.1: Keyboard	A	Supports
2.1.2: No Keyboard Trap	A	Supports
2.1.4: Character Key Shortcuts (2.1)	A	Supports (N/A)
2.2.1: Timing Adjustable	A	Supports
2.2.2: Pause, Stop, Hide	A	Supports (N/A)
2.3.1: Three Flashes or Below Threshold	A	Supports (N/A)
2.4.1: Bypass Blocks	A	Supports
2.4.2: Page Titled	A	Supports
2.4.3: Focus Order	A	Partially supports
2.4.4: Link Purpose (In Context)	A	Partially supports
2.4.5: Multiple Ways	AA	Supports
2.4.6: Headings and Labels	AA	Supports
2.4.7: Focus Visible	AA	Supports
2.4.11: Focus Not Obscured (Minimum) (2.2)	AA	Partially supports
2.5.1: Pointer Gestures (2.1)	A	Supports
2.5.2: Pointer Cancellation (2.1)	A	Supports
2.5.3: Label in Name (2.1)	A	Supports
2.5.4: Motion Actuation (2.1)	A	Supports (N/A)
2.5.7: Dragging Movements (2.2)	AA	Supports (N/A)

WCAG 2.2 Success Criterion	Level	Evaluation
2.5.8: Target Size (Minimum) (2.2)	AA	Supports
3.1.1: Language of Page	A	Partially supports
3.1.2: Language of Parts	AA	Supports
3.2.1: On Focus	A	Supports
3.2.2: On Input	A	Supports
3.2.3: Consistent Navigation	AA	Supports
3.2.4: Consistent Identification	AA	Supports
3.2.6: Consistent Help (2.2)	A	Supports
3.3.1: Error Identification	A	Supports
3.3.2: Labels or Instructions	A	Partially supports
3.3.3: Error Suggestion	AA	Supports
3.3.4: Error Prevention (Legal, Financial, Data)	AA	Supports (N/A)
3.3.7: Redundant Entry (2.2)	A	Supports
3.3.8: Accessible Authentication (Minimum) (2.2)	AA	Supports
4.1.1: Parsing	A	Supports (N/A)
4.1.2: Name, Role, Value	A	Partially supports
4.1.3: Status Messages (2.1)	AA	Supports

WCAG 2.2 A and AA Success Criteria

Visuals

WCAG 2.2 Checkpoint	Conformance Level	Remarks
1.1.1: Non-Text Content (A) Provide text alternatives for non-text content (e.g. images)	Partially supports	Almost all images, icons, and graphs include text equivalents. Lesson content images include alt text. Exceptions: Course Plan: The "No Scores available" icon does not have a proper text alternative. Reading Assignment: Some textbook covers have alt text that is not descriptive (e.g., "Textbook cover").
1.3.3: Sensory Characteristics (A) Do not rely on sensory characteristics of components such as shape, size, visual location, orientation, or sound	Supports	There are no instructions or areas of content which rely solely on sensory characteristics.
1.4.1: Use of Color (A) Color is not used as the only visual means of conveying info	Partially supports	When color is used as a means of conveying information, another visual method is also used to convey the information without color in most cases. Exceptions: Account Settings: The "try again" link for changing passwords does not have enough contrast with the surrounding text and is undecorated.
1.4.3: Color Contrast (Minimum) (AA) Text has enough contrast with the background (4.5:1 for small text and 3:1 for large text)	Partially supports	Text has sufficient contrast with its corresponding background in most areas. Exceptions: Reading Assignment: The Change Textbooks text does not have enough contrast at 2.1:1. Book names within the tabs do not have enough contrast at 4.42:1. "Choose your Text" does not have enough contrast at 2.2:1. Module Preview: The light gray text used as a static breadcrumb does not have enough contrast at 2.96:1. Orange list numbers do not have enough contrast at 3.26:1. Simulation Exercise: The light gray text used as a static breadcrumb does not have enough contrast at 2.96:1.
1.4.4: Resize Text (AA) Text can be enlarged up to 200% without loss of functionality.	Supports	Text may be enlarged to 200% while preserving functionality of content.
1.4.5: Images of Text (AA) Text is used rather than images of text,	Partially supports	No images of text are used other than for logos or essential presentation. Exceptions:

except where the presentation of text is essential, such as logos		Reading Assignment: "Change Textbooks" is a background image.
1.4.10: Reflow (AA) Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for: • Vertical scrolling content at a width equivalent to 320 CSS pixels; • Horizontal scrolling content at a height equivalent to 256 CSS pixels.	Partially supports	Most pages utilize a responsive view where content reflows into a single column. Most pages may be zoomed to 400% without necessitating horizontal scrolling, nor loss of functionality/content. Exceptions: Reading Assignment: The page does not reflow at all. The change textbooks modal can be cut off at small screen viewports and does not adjust to screen size.
1.4.11: Non-Text Contrast (AA) User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s).	Supports	Non-text UI components and graphical objects have at least a 3:1 contrast ratio against surrounding colors.
1.4.12: Text Spacing (AA) In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all the following and by changing no other style property: • Line height (line spacing) to at least 1.5 times the font size; • Spacing following paragraphs to at least 2 times the font size; • Letter spacing (tracking) to at	Partially supports	Users may adjust the text spacing of content on pages to the minimum baseline properties without causing loss of content or functionality in all areas. Exceptions: Reading Assignment: The text within the Choose your Text modal extends beyond the modal when minimum text styles are applied.

least 0.12 times the font size; Word spacing to at least 0.16 times the font size.		
1.4.13: Content on Hover or Focus (AA) Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true: - Dismissible - Hoverable - Persistent	Supports (N/A)	There is no content that appears on focus or hover.
2.3.1: Three Flashes or Below Threshold (A) No more than three flashes in a 1-second period, or the flashes are below the defined thresholds	Supports (N/A)	No flashing content exists.

Keyboard

WCAG 2.2 Checkpoint	Conformance Level	Remarks
1.3.2: Meaningful Sequence (A) The correct reading sequence can be programmatically determined	Supports	The correct reading sequence is typically logical and programmatically determinable, with the DOM order according with the visual order.
2.1.1: Keyboard (A) All functionality is available from a keyboard, except for tasks such as drawing	Supports	Standard web page content and functionality is keyboard operable across pages.
2.1.2: No Keyboard Trap (A) The user can use the keyboard to move through page elements and is not trapped on a particular element	Supports	No pages have a keyboard trap.
2.1.4: Character Key Shortcuts (A) If a keyboard shortcut is implemented in content using only	Supports (N/A)	The site does not use any character key shortcuts.

letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true: • Turn off • Remap • Active only on focus		
2.4.3: Focus Order (A) Users can tab through the elements of a page in a logical order	Partially supports	Tab order is largely logical across the site and preserves the meaning and operability of content in most instances. Exceptions: Course Plan: Visible focus should change to the active tab when moving between them with arrow keys. Reading Assignment: The Change Textbook modal does not trap or manage focus properly.
2.4.7: Focus Visible (AA) The page element with the current keyboard focus has a visible focus indicator	Supports	All elements across the site use a custom styled visible focus indicator.
2.4.11: Focus Not Obscured (Minimum) (AA) When a user interface component receives keyboard focus, the component is not entirely hidden due to author-created content.	Partially supports	No author-created content completely obscures keyboard focus that can't be hidden in most areas. Exceptions: Reading Assignment: Users can reach content behind the Choose your Text modal.
3.2.1: On Focus (A) When a UI component receives focus, this does not trigger unexpected actions.	Supports	Focusable elements do not cause unexpected actions/changes of context when receiving focus.

Headings and Structure

WCAG 2.2 Checkpoint	Conformance Level	Remarks
1.3.1: Information and Relationships (A) Info, structure, and relationships can be programmatically determined	Partially supports	Most content is distinguishable via semantic structure and relationships. A logical heading order reflecting page organization and content is programmatically determinable on most pages. List markup is used appropriately in many instances. Most input elements have programmatically determinable labels. HTML sectioning elements/landmark roles demarcate content regions.

		Exceptions: Edit/Add Assignment: "Access and Visibility" should be an h2. Module Preview: The complex tables have both row and column headers that do not have their scopes defined. Reading Assignment: The checkboxes in the Choose your Text modal are not programmatically connected to their adjacent text.
2.4.1: Bypass Blocks (A) Users can bypass repeated blocks of content.	Supports	All pages have a "skip to content" link.
2.4.6: Headings and Labels (AA) Headings and labels are clear and consistent.	Supports	Headings and labels used are typically clear and descriptive. For example, most pages feature visually distinct and programmatically determinable main and secondary headings to help distinguish content.
3.1.1: Language of Page (A) The language of the page is specified	Partially supports	The default page language is typically and appropriately defined as lang="en". Exceptions: Readings Assignment: No lang attribute is specified.
3.1.2: Language of Parts (AA) Specify the language of text passages that are in a different language than the default language of the page.	Supports	Sections of text that are in a different language than the page default are marked with the proper language attribute.
4.1.1: Parsing (A) Use valid, error-free HTML	Supports (N/A)	Parsing is deprecated in WCAG 2.2 HTML and CSS typically pass concerning these 4 specific criteria: (i) elements have complete start and end tags, (ii) elements are nested according to their specifications (iii) elements do not contain duplicate attributes (iv) any IDs are unique, except where the specifications allow these features. Note: There may be other general HTML validation errors outside the scope of this criterion. WCAG 2.1 Errata notes: "This Success Criterion should be considered as always satisfied for any content using HTML or XML."

Labeling

WCAG 2.2 Checkpoint	Conformance Level	Remarks
1.3.5: Identify Input Purpose (AA) The purpose of each input field collecting	Supports (N/A)	There are no forms of the kind described by this criterion.

information about the user can be programmatically determined when: • The input field serves a purpose identified in the Input Purposes for User Interface Components section; and • The content is implemented using technologies with support for identifying the expected meaning for form input data.		
2.4.2: Page Titled (A) The page has a title describing its topic or purpose	Supports	A descriptive page title that identifies content/purpose is present on all pages.
2.4.4: Link Purpose (In Context) (A) The purpose of each link can be determined from the link text or surrounding context.	Partially supports	An identifiable purpose may be deduced for almost all links from the link text or surrounding context. Exceptions: Reading Assignment: The book covers can have generic link names, such as "Textbook Cover".
2.5.3: Label in Name (A) For user interface components with labels that include text or images of text, the name contains the text that is presented visually.	Supports	User interface components that have visible text contain that text consistently within the accessible name.
3.2.4: Consistent Identification (AA) UI components used across the web site are identified consistently on every page.	Supports	Components are typically consistent across the site, and identified consistently where they perform the same function across pages.
3.3.1: Error Identification (A) Input errors are clearly marked and described to the user.	Supports	Errors are identified and presented well visually. Errors are announced to AT and have red text and a symbol marking the error.
3.3.2: Labels or Instructions (A)	Partially supports	Labels or instructions are provided for form elements which are typically programmatically associated with their inputs.

Items requiring user input are clearly labeled or have clear instructions.		Exceptions: Register: The extra password info should not have an aria-label, as it replaces the actual password info. Note: Visual labels that are not connected with their inputs are addressed in SC 1.3.1: Information and Relationships.
3.3.3: Error Suggestion (AA) When the user makes an input error, give suggestions for valid input.	Supports	The nature of content would largely not give rise to opportunities for error suggestions, but relevant helpful suggestions are occasionally provided in text.
4.1.2: Name, Role, Value (A) For all UI components, the name, value, and role can be programmatically determined.	Partially supports	Most UI components communicate their state programmatically, and many have accessible names that are appropriately defined. Several ARIA attributes and roles are not present where appropriate. Exceptions: Reading Assignment: The tab links should be buttons. The tabs should be marked up as ARIA Tabs. Choose your Text modal needs role="dialog", aria-modal="true", and a label. Module Preview: The expand/collapse questions need to have aria-expanded on their button elements on page load. Assignment Report: The information tooltip button needs button text that is descriptive.
4.1.3: Status Messages (AA) In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus.	Supports	Error status messages are read out automatically by AT due to focus management.

Multimedia

WCAG 2.2 Checkpoint	Conformance Level	Remarks
1.2.1: Audio-only or Video-only (Prerecorded) (A) Provide alternatives for pre-recorded audio-only or video-only content.	Supports (N/A)	There is no pre-recorded audio-only or video-only content.

1.2.2: Captions (Prerecorded) (A) Provide captions for pre-recorded audio	Supports (N/A)	There is no pre-recorded audio content.
1.2.3: Audio Description or Media Alternative (Prerecorded) (A) Provide alternatives for pre-recorded synchronized audio/video	Supports (N/A)	There is no pre-recorded synchronized audio/video content.
1.2.4: Captions (Live) (AA) Provide captions for live audio in synchronized audio/video.	Supports (N/A)	There is no synchronized audio/video content nor live audio.
1.2.5: Audio Description (Prerecorded) (AA) Provide an audio description of pre-recorded video.	Supports (N/A)	There is no pre-recorded video content.
1.4.2: Audio Control (A) Audio can be paused and stopped, or the audio volume can be changed.	Supports (N/A)	No pages feature audio that plays automatically.
2.2.2: Pause, Stop, Hide (A) Users can stop, pause, or hide moving, blinking, scrolling, or auto-updating information.	Supports (N/A)	There is no moving, scrolling, or auto-updating information for which the criterion is applicable.

Usability

WCAG 2.2 Checkpoint	Conformance Level	Remarks
2.2.1: Timing Adjustable (A) Users are warned of time limits shorter than 20 hours and time limits can be turned off or extended	Supports	The product has a session timeout, but users are made aware and given the option to extend.
2.4.5: Multiple Ways (AA)	Supports	All pages are a result of a process.

More than one way is available to navigate to other web pages.		
3.2.2: On Input (A) Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context.	Supports	User input, such as changing the values of form elements, does not initiate unexpected actions or changes in context.
3.2.3: Consistent Navigation (AA) Navigation menus are in the same location and order on every web page.	Supports	Navigation menus are consistent across pages.
3.2.6: Consistent Help (A) Help mechanisms such as contact details or self-help options are in the same relative order across multiple web pages, unless the user changes them.	Supports	Help mechanisms are always available in the footer in the same place.
3.3.7: Redundant Entry (A) Previously entered information is either auto-populated or selectable for the user in the same process, except when re-entry is essential, needed for security, or the information is outdated.	Supports	There are no forms of the kind described by this criterion.
3.3.8: Accessible Authentication (Minimum) (AA) A cognitive function test (such as remembering a password or solving a puzzle) is not required for any step in an authentication process unless that step provides at least one of the following: • Alternative • Mechanism	Supports	Authentication processes are not used within Shadow Health Lab.

- Object Recognition - Personal Content		
3.3.4: Error Prevention (Legal, Financial, Data) (AA) For web pages with legal or financial commitments, input can be reviewed and corrected before final submission, and submissions can be reverted.	Supports (N/A)	There are no submissions which require legal or financial commitments.

Mobile User Experience

WCAG 2.2 Checkpoint	Conformance Level	Remarks
1.3.4: Orientation (AA) Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential.	Supports	Pages do not restrict view and operation of content to a single orientation.
2.5.1: Pointer Gestures (A) All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential.	Supports	Pages do not utilize or require multipoint or path-based gestures for any functionality.
2.5.2: Pointer Cancellation (A) For functionality that can be operated using a single pointer, at least one of the following is true: - No Down-Event - Abort or Undo - Up Reversal - Essential	Supports	All interactive content functions through the Up-Event, allowing users to potentially move their pointer off the component to cancel.
2.5.4: Motion Actuation (A)	Supports (N/A)	There is no content that utilizes device or user motion.

Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when: • Supported Interface • Essential		
2.5.7: Dragging Movements (AA) All functionality that uses a dragging movement for operation can be achieved by a single pointer without dragging, unless dragging is essential or the functionality is determined by the user agent and not modified by the author.	Supports (N/A)	There is no content that uses a dragging movement.
2.5.8: Target Size (Minimum) (AA) The size of the target for pointer inputs is at least 24 by 24 CSS pixels, with certain exceptions involving: • Spacing • Equivalent • Inline • User agent control • Essential	Supports	All UI elements have a target size that is at least 24 by 24 CSS pixels.