VPAT Accessibility Conformance Report

(Based on ITI VPAT©)

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| **Name of Product** | **Simulation Learning System (SLS)** |
| **Date Last Updated** | **October 4, 2021** |
| Completed by | Jay Nemchik (Digital Accessibility Team, Dayton) |
| **Applicable Standards/Guidelines** | This document rates SLS according to the W3C WCAG 2.1 A and AA requirements. |
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| **Testing Tools and Methods** | **Hands-on keyboard operation Firebug/Code inspection Firefox Web Developer Toolbar (removing style sheets) JAWS 18 on Mozilla Firefox 63 and MS IE 11 on Windows 10 NVDA screen reader v2019.2.1 Wave Extension**  **Color Contrast Analyzer W3C WAI Pages** Elsevier Accessibility Checklist: <http://romeo.elsevier.com/accessibility_checklist/> |
| **Document Sections** | The review document below includes all WCAG 2.1 A and AA checkpoints and is organized into 6 logical sections:   * Visuals * Keyboard * Headings and Structure * Labeling * Multimedia * Usability |
| **Pages Covered** | Scenario Finder, Simulation Scenarios, PDFs |
| **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.** |

| **WCAG 2.1 Success Criterion** | **Level** | **Evaluation** |
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| 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 | Partially supports |
| 1.2.3 Audio Description or Full Text Alternative | A | Does not support |
| 1.2.4 Captions (Live) | AA | Supports (N/A) |
| 1.2.5 Audio Description | AA | Does not support |
| 1.3.1 Info and Relationships | A | Partially supports |
| 1.3.2 Meaningful Sequence | A | Partially 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 | 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 | Partially supports |
| 1.4.12 Text Spacing (2.1) | AA | Partially supports |
| 1.4.13 Content on Hover or Focus (2.1) | AA | Does not support |
| 2.1.1 Keyboard | A | Partially 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 (N/A) |
| 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 | Partially supports |
| 2.4.2 Page Titled | A | Partially supports |
| 2.4.3 Focus Order | A | 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 | Does not support |
| 2.5.1 Pointer Gestures (2.1) | A | Supports (N/A) |
| 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) |
| 3.1.1 Language of Page | A | Does not support |
| 3.1.2 Language of Parts | AA | Supports (N/A) |
| 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 |
| 3.3.1 Error Identification | A | Supports (N/A) |
| 3.3.2 Labels or Instructions | A | Does not support |
| 3.3.3 Error Suggestion | AA | Supports (N/A) |
| 3.3.4 Error Prevention (Legal, Financial, Data) | AA | Supports (N/A) |
| 4.1.1 Parsing | A | Supports |
| 4.1.2 Name, Role, Value | A | Partially Supports |
| 4.1.3 Status Messages (2.1) | AA | Supports (N/A) |

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| **Visuals** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.1.1: Non-Text Content](http://www.w3.org/TR/WCAG20/#text-equiv-all) (A) Provide text alternatives for non-text content (e.g. images) | Partially supports | Images, icons, and graphs include text equivalents.  **Exceptions:**  Scenario Finder: The Elsevier logo does not have alt text. The Index, Search Catalog, and Resources images do not have alt text.  Simulation Scenarios: Several decorative images (light yellow borders) should have alt="".  PDFs: Figures used within the PDFs do not have alternative text. |
| [1.3.3: Sensory Characteristics](http://www.w3.org/TR/WCAG20/#content-structure-separation-understanding) (A) Do not rely on sensory characteristics of components such as shape, size, visual location, orientation, or sound | Supports | Content does not rely on sensory characteristics. |
| [1.4.1: Use of Color](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-without-color) (A) Color is not used as the only visual means of conveying info | Supports | Color is not used as the only means of conveying information. |
| [1.4.3: Color Contrast (Minimum)](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-contrast) (AA) Text has enough contrast with the background (4.5:1 for small text and 3:1 for large text) | Partially supports | Most text has enough contrast with its corresponding background.  **Exceptions:**  Scenario Finder: The white text on orange background for the navigation does not have enough contrast at 2.49:1. The gray breadcrumb links do not have enough contrast at 3.12:1. The search placeholder text does not have enough contrast at approximately 3.07:1. The white text on orange background Diagnoses menus do not have enough contrast at 2.49:1.  Simulation Scenarios: All text, except for black/white combinations do not have enough contrast.  PDFs: There are some instances of insufficient color contrast in the PDFs, such as light blue on white (2.53:1) and light green on white (2.39:1). |
| [1.4.4: Resize Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-scale) (AA)  Text can be enlarged up to 200% without loss of functionality. | Supports | Text can be enlarged to 200% without loss of functionality. |
| [1.4.5: Images of Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-text-presentation) (AA) Text is used rather than images of text, except where the presentation of text is essential, such as logos | Partially supports | The Scenario Finder does not use images of text.  **Exceptions:** Simulation Scenarios: Images of text are used in many places (e.g. Main topic, sub-topic, all navigation buttons, change textbooks, next/previous). |
| [1.4.10 Reflow](https://www.w3.org/TR/WCAG21/#reflow) (AA) (2.1) 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 | Some parts of the site require scrolling in two directions to view properly.  **Exceptions:**  Simulation Scenarios do not reflow at small screen sizes. |
| [1.4.11 Non-Text Contrast](https://www.w3.org/TR/WCAG21/#non-text-contrast) (AA)  (2.1) User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s). | Partially supports | There are very few UI components and graphical objects that do not pass the minimum contrast ratio of 3:1.  **Exceptions:**  Simulation Scenarios: The Patient Report, Algorithm Quick Card, and Performance Checklist buttons do not have enough contrast with the white background. |
| [1.4.12 Text Spacing](https://www.w3.org/TR/WCAG21/#text-spacing) (AA)  (2.1)  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 least 0.12 times the font size;  Word spacing to at least 0.16 times the font size. | Partially supports | Most content can be adjusted to the minimum text spacing requirements without loss of readability or functionality.  **Exceptions:**  Scenario Finder: The search placeholder text gets cut off with minimum text spacing styles applied.  Simulation Scenarios: Some text overflows outside the boundary areas. The Previous button and Screen # text can overlap. |
| [1.4.13 Content on Hover or Focus](https://www.w3.org/TR/WCAG21/#content-on-hover-or-focus) (AA)  (2.1)  Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:   * Dismissable * Hoverable * Persistent | Does not support | There is almost no content that appears on hover or focus.  **Exceptions:**  Simulation Scenarios: The navigation dropdowns appear on hover but cannot be dismissed with the Esc key. |
| [2.3.1: Three Flashes or Below Threshold](http://www.w3.org/TR/WCAG20/#seizure-does-not-violate) (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 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.2: Meaningful Sequence](http://www.w3.org/TR/WCAG20/#content-structure-separation-sequence) (A)  The correct reading sequence can be programmatically  determined | Partially supports | The correct reading sequence is logical, matching the visual ordering of content.  **Exceptions:**  Simulation Scenarios: The navigation dropdown contents should appear directly after the activating menu buttons.  PDFs: The reading order of the PDFs is not defined. Several PDFs, such as the Algorithm Quick Card, require a designated reading order to communicate what is done visually. |
| [2.1.1: Keyboard](http://www.w3.org/TR/WCAG20/#keyboard-operation-keyboard-operable) (A)  All functionality is available from a keyboard, except for tasks such as drawing | Partially supports | Most content is keyboard operable.  **Exceptions**:  Scenario Finder: The search button cannot be reached by keyboard.  Simulation Scenarios: The navigation dropdown buttons and contents cannot be reached by keyboard.  Note: In the Simulation Scenarios, certain elements are blocked from being reached in the Firefox Browser. Recommend using Chrome. |
| [2.1.2: No Keyboard Trap](http://www.w3.org/TR/WCAG20/#keyboard-operation-trapping) (A)  The user can use the keyboard to move through page elements and is not trapped on a particular element | Supports | No keyboard traps exist on the site. |
| [2.1.4 Character Key Shortcuts](https://www.w3.org/TR/WCAG21/#character-key-shortcuts) (A)  (2.1)  If a keyboard shortcut is implemented in content using only 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 | Supports (N/A) | No keyboard shortcuts are implemented on the site. |
| [2.4.3: Focus Order](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-order) (A)  Users can tab through the elements of a page in a logical order | Supports | The application has a logical tab order. |
| [2.4.7: Focus Visible](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-visible) (AA)  The page element with the current keyboard focus has a visible focus indicator | Does not support | Many elements use a good visible focus. Several exceptions exist.  **Exceptions:**  Scenario Finder: The navigation links and the Elsevier logo do not have a visible focus. The SLS Patients menu focus indicator makes the text unreadable.  Simulation Scenarios: Nearly all content does not have a visible focus (external links such as Scenario Snapshot have a focus). |
| [3.2.1: On Focus](http://www.w3.org/TR/WCAG20/#consistent-behavior-receive-focus) (A)  When a UI component receives focus, this does not trigger unexpected actions. | Supports | Focusable elements do not cause unexpected actions when receiving focus. |
| **Headers and Structure** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.1: Information and Relationships](http://www.w3.org/TR/WCAG20/#content-structure-separation-programmatic) (A)  Info, structure, and relationships can be programmatically determined | Partially supports | Headings are sometimes used to structure content. Landmarks are not used. Lists are used to group related elements.  **Exceptions:**  Scenario Finder: The main heading of the page (e.g. Curriculum Concepts) should be an h1.  Simulation Scenarios: The main content of the page should have a "main" landmark.  PDFs: The PDFs used are not tagged, including any lists, tables, headings, etc. |
| [2.4.1: Bypass Blocks](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-skip) (A)  Users can bypass repeated blocks of content. | Partially supports | Headings exist in some places, allowing users using Assistive Technology to jump to the different areas of content quickly.  **Exceptions:**  There is no skip to main content link for any of the pages. |
| [2.4.6: Headings and Labels](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-descriptive) (AA)  Headings and labels are clear and consistent. | Supports | Headings and labels used are clear and descriptive. |
| [3.1.1: Language of Page](http://www.w3.org/TR/WCAG20/#meaning-doc-lang-id) (A)  The language of the page is specified | Does not support | The language is not defined within the application.  The PDFs do not have a defined language. |
| [3.1.2: Language of Parts](http://www.w3.org/TR/WCAG20/#meaning-other-lang-id) (AA)  Specify the language of text passages that are in a different language than the default language of the page. | Supports (N/A) | There are no passages of text different then the page default. |
| [4.1.1: Parsing](http://www.w3.org/TR/WCAG20/#ensure-compat-parses) (A)  Use valid, error-free HTML | Supports | HTML and CSS passes 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. |
| **Labeling** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| 1.3.5 Identify Input Purpose (AA)  (2.1)  The purpose of each input field collecting 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. | Supports (N/A) | There are no pages with fields that collect personal information. |
| [2.4.2: Page Titled](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-title) (A)  The page has a title describing its topic or purpose | Partially supports | The page title is generic to each application and does not change based on the chosen scenario or page. (e.g. Scenario finder's page title is always "Scenario Finder"). |
| [2.4.4: Link Purpose (In Context)](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-refs) (A)  The purpose of each link can be determined from the link text or surrounding context. | Partially supports | Most links used have an identifiable purpose from the link text or surrounding context.  **Exceptions:**  Scenario Finder: The Elsevier Logo link does not have link text.  Simulation Scenarios: All links in the application are external, but do not indicate that they open in a new tab. |
| [2.5.3 Label in Name](https://www.w3.org/TR/WCAG21/#label-in-name) (A)  (2.1)  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 have the visible label as part of the programmatic label. |
| [3.2.4: Consistent Identification](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-functionality) (AA)  UI components used across the web site are identified consistently on every page. | Supports | UI components are consistent across the site in terms of HTML implementation and labelling. |
| [3.3.1: Error Identification](http://www.w3.org/TR/WCAG20/#minimize-error-identified) (A)  Input errors are clearly marked and described to the user. | Supports (N/A) | There are no input errors of the kind described by this criterion. |
| [3.3.2: Labels and Instructions](http://www.w3.org/TR/WCAG20/#minimize-error-cues) (A)  Items requiring user input are clearly labeled or have clear instructions. | Does not support | There are very few input elements in the application, but they are all unlabeled.  **Exceptions:**  Scenario Finder: The search input does not have a label, as a placeholder alone is not sufficient.  Simulation Scenarios: The checkboxes for choosing which textbook to use are unlabeled. |
| [3.3.3: Error Suggestion](http://www.w3.org/TR/WCAG20/#minimize-error-suggestions) (AA)  When the user makes an input error, give suggestions for valid input. | Supports (N/A) | There are no forms on the site that would give error suggestions. |
| [4.1.2: Name, Role, Value](http://www.w3.org/TR/WCAG20/#ensure-compat-rsv) (A)  For all UI components, the name, value, and role can be programmatically determined. | Partially supports | Some UI components communicate their state programmatically.  **Exceptions:**  Scenario Finder: The INDEX element in the navigation should be a button and have aria-expanded. SLS Patients should have aria-haspopup="true". All of the Diagnoses buttons should have aria-haspopup="true".  Simulation Scenarios: The navigation elements should be buttons and be coded as ARIA menus. |
| [4.1.3 Status Messages](https://www.w3.org/TR/WCAG21/#status-messages) (AA)  (2.1)  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 (N/A) | There are no status messages in the application. |
| **Multimedia** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.2.1: Audio-only or Video-only (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-av-only-alt) (A)  Provide alternatives for pre-recorded audio-only or video-only content. | Supports (N/A) | No pre-recorded audio-only or video-only content was reviewed. |
| [1.2.2: Captions (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-captions) (A)  Provide captions for pre-recorded audio | Partially supports | There are videos in the Simulation Scenarios multimedia resources. Some videos have open captions, whereas some videos are without captions. |
| [1.2.3: Audio Description or Media Alternative (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc) (A)  Provide alternatives for pre-recorded synchronized audio/video | Does not support | There are videos in the Simulation Scenarios multimedia resources. The videos do not have any alternatives. |
| [1.2.4: Captions (Live)](http://www.w3.org/TR/WCAG20/#media-equiv-real-time-captions) (AA)  Provide captions for live audio in synchronized audio/video. | Supports (N/A) | There is no live audio in synchronized audio/video. |
| [1.2.5: Audio Description (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc-only) (AA)  Provide an audio description of pre-recorded video. | Does not support | There are videos in the Simulation Scenarios multimedia resources. The videos do not have audio descriptions. |
| [1.4.2: Audio Control](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-dis-audio) (A)  Audio can be paused and stopped, or the audio volume can be changed. | Supports | There is no automatically playing audio content on the site. |
| [2.2.2: Pause, Stop, Hide](http://www.w3.org/TR/WCAG20/#time-limits-pause) (A)  Users can stop, pause, or hide moving, blinking, scrolling, or auto-updating information. | Supports (N/A) | There is no moving, blinking, scrolling, or auto-updating information on the site. |
| **Usability** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [2.2.1: Timing Adjustable](http://www.w3.org/TR/WCAG20/#time-limits-required-behaviors) (A)  Users are warned of time limits shorter than 20 hours and time limits can be turned off or extended | Supports (N/A) | There is an Evolve session timeout, which is covered by the Evolve VPAT. The SLS product itself does not have a session timeout. |
| [2.4.5: Multiple Ways](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-mult-loc) (AA)  More than one way is available to navigate to other web pages. | Supports | All parts of the site can be reached by navigation pages or by search. |
| [3.2.2: On Input](http://www.w3.org/TR/WCAG20/#consistent-behavior-unpredictable-change) (A)  Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context. | Supports | User inputs do not cause unexpected actions. |
| [3.2.3: Consistent Navigation](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-locations) (AA)  Navigation menus are in the same location and order on every web page. | Supports | Navigation menus are consistently in the same place and in same order. |
| [3.3.4: Error Prevention (Legal, Financial, Data)](http://www.w3.org/TR/WCAG20/#minimize-error-reversible) (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) | No data submissions on the site require legal or financial commitments. No data submissions allow for a users’ profile to be deleted. |
| **Mobile User Experience** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.4 Orientation](https://www.w3.org/TR/WCAG21/#orientation)  (AA)  (2.1)  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 | Content is not restricted to a single display orientation. |
| [2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG21/#pointer-gestures) (A)  (2.1)  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 (N/A) | There is no content on the site that requires multipoint or path-based gestures. |
| 2.5.2 Pointer Cancellation (A)  (2.1)  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 content that can be operated with a single pointer can be undone or is performed on the up-event. |
| [2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG21/#motion-actuation)  (A)  (2.1)  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 | Supports (N/A) | There is no content on the site that is activated by motion or actuation. |