VPAT Accessibility Conformance Report

(Based on ITI VPAT©)

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| **Name of Product** | **Osmosis** |
| **Date Last Updated** | **June 27, 2024** |
| Completed by | Nicholas Seow (Elsevier Digital Accessibility Team) |
| **Applicable Standards/Guidelines** | This document rates Osmosis according to the [W3C WCAG 2.1 A and AA](https://www.w3.org/TR/WCAG21/) requirements. |
| **Contact for More Information** | Elsevier Digital Accessibility Team [accessibility@elsevier.com](mailto:accessibility@elsevier.com?subject=Accessibility%20and%20Shadow%20Health) |
| **Testing Tools and Methods** | * **Hands-on keyboard operation** * **DevTools/Code inspection** * **Mozilla Firefox 127 and Chrome 126 on Windows 11 23H2** * **NVDA screen reader 2024.2** * **WAVE Browser Extension** * **Color Contrast Analyzer** * [W3C Web Accessibility Initiative (WAI) Pages](https://www.w3.org/WAI/) * [Elsevier Accessibility Checklist](http://romeo.elsevier.com/accessibility_checklist/) |
| **Document Sections** | This review document includes all WCAG 2.1 A and AA checkpoints, organized into 7 logical sections:   * Visuals * Keyboard * Headings and Structure * Labeling * Multimedia * Usability * Mobile User Experience |
| **Pages Covered** | * *Learning tools and resources:* Dashboard, Search, Library, Video, Playlists, Quiz, Flashcards, Decks, Question Quiz Builder * *User account management:* Account, Analytics * *Access and authentication:* Login, Create Account |
| **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.** |

## Conformance Summary

| **WCAG 2.1 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 |
| 1.2.3: Audio Description or Full Text Alternative | A | Supports |
| 1.2.4: Captions (Live) | AA | Supports (N/A) |
| 1.2.5: Audio Description | AA | Partially supports |
| 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 | Does not support |
| 1.4.1: Use of Color | A | Partially supports |
| 1.4.2: Audio Control | A | Supports |
| 1.4.3: Contrast (Minimum) | AA | Partially supports |
| 1.4.4: Resize text | AA | Supports |
| 1.4.5: Images of Text | AA | 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 | Supports |
| 1.4.13: Content on Hover or Focus (2.1) | AA | Partially supports |
| 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 |
| 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 |
| 2.4.1: Bypass Blocks | A | Partially supports |
| 2.4.2: Page Titled | A | Partially 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 | Partially supports |
| 2.4.7: Focus Visible | 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 | Partially supports |
| 2.5.4: Motion Actuation (2.1) | A | Supports |
| 3.1.1: Language of Page | A | Partially supports |
| 3.1.2: Language of Parts | AA | Does not support |
| 3.2.1: On Focus | A | Supports |
| 3.2.2: On Input | A | Partially supports |
| 3.2.3: Consistent Navigation | AA | Supports |
| 3.2.4: Consistent Identification | AA | Partially supports |
| 3.3.1: Error Identification | A | Partially 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 |
| 4.1.1: Parsing | A | Supports |
| 4.1.2: Name, Role, Value | A | Partially supports |
| 4.1.3: Status Messages (2.1) | AA | Does not support |

## WCAG 2.1 A and AA Success Criteria

### Visuals

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.1.1: Non-Text Content](https://www.w3.org/TR/WCAG21/#non-text-content) (A) Provide text alternatives for non-text content (e.g. images) | Partially supports | Many images and icons have appropriate text equivalents.  For key “Notes” figure illustration on Video page, minimally descriptive figure identification/numbering and legend notes are typically provided in the form of adjacent figure captions. Fully descriptive text equivalents for figures are not present as fallback content for the image viewer <canvas> widgets (or via other conventional/structured method). However, thorough descriptions of information represented in such figure illustrations are usually indirectly represented within the audiovisual multimedia content and text (i.e. transcript) on the same topical Video page. Page structure/headings clearly identify the main multimedia content on Video pages and the corresponding full-text transcript. (Further information on audiovisual content and alternatives in the Multimedia section below.)  Alternatives for charts within the Analytics section are provided in the form of downloadable data spreadsheets – although the charts themselves lack immediately usable text alternatives (neither accessible name/role nor fallback text for the <canvas> element).  **Exceptions:**   * Dashboard: Daily Practice streak icon – The flame icon graphic that represents the streak count along with its adjacent number lacks a text alternative * Search: Search result preview thumbnails – Search result type (e.g. video or document) is visually indicated via icons upon pointer hover, or other cues such as image aspect ratios – but this information is not communicated via a text alternative * Login, Create Account: Social media links – Brand icons for social media platforms are decorative yet have alt text, resulting in repetitive link labels * Library: Item detail icons, thumbnails – Icons' alt text values, e.g. "notes"/"yt-osm", may not be sufficiently descriptive of their meaning – an appropriate text alternative is only provided via tooltip on pointer hover. Item type is visually indicated via icons upon pointer hover (or thumbnail image itself), but this information is not communicated via a text alternative. * Video: "High Yield Notes" thumbnails – Links to Note pages may lack accessible names, as enclosed thumbnail images may lack alt text – however, link elements typically have descriptive labels present in the title attribute. * Video: "Notes" figures – Images (implemented via <canvas> viewers) may lack adequately descriptive text alternatives in some instances. Image viewer <canvas> elements lack fallback content, while adjacent figure captions (not programmatically associated) typically provide minimally descriptive figure identification/numbering and legend notes. Some images intended for study/identification exercises (sans labels) lack these adjacent figure captions. * Video: Related topics playlist items – Previously recorded progress in playlist video items is represented in blue stroke around a circle icon, but the information is not communicated otherwise * Quiz: Quiz summary donut chart / Quiz "progress wheel" – Chart graphic and its (interactive) components lack text alternatives, although the components correspond equivalently to various labelled controls under "More options" * Quiz: Quiz image – Images may lack descriptive text alternatives (image content may be part of a visual identification test/exercise) |
| [1.3.3: Sensory Characteristics](https://www.w3.org/TR/WCAG21/#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](https://www.w3.org/TR/WCAG21/#use-of-color) (A) Color is not used as the only visual means of conveying info | Partially supports | In most instances, when color is used as a means of conveying information, another visual method is also used to convey the information without color. For example, on Quiz pages, binary options are indicated via ‘x’ or check symbols and text, in addition to their color differences (red vs. green).  **Exceptions:**   * Login: Input fields – Error state of input fields is indicated via color difference (grey vs. red) yet lacks another visual means of indication (e.g. symbol) – the error message may not be sufficiently specific * Login: "Sign up" and "Start here" links – Links are in-line with adjacent text, yet lack another visual indication beyond color difference, e.g. underline style * Video: "High Yield Notes" pagination – Button (dot icon) indicating current page selection is only distinguished by color from other buttons (blue vs. grey) * Video: Related topics playlist items – Current active topic and previously recorded progress is only indicated via a color difference (blue) in text and icon * Quiz: Quiz control buttons – Toggled state of buttons is only indicated via differences in color (colorful vs. grey icons) |
| [1.4.3: Color Contrast (Minimum)](https://www.w3.org/TR/WCAG21/#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 many areas, although (most consequentially among the exceptions) headings and component/field labels may occasionally fail to meet the minimum contrast ratio defined by the criterion.  **Exceptions:**   * All: User tag in hamburger menu, e.g. "Prime" – Text may lack sufficient contrast against its background, e.g. blue against light blue * Dashboard: Sidebar navigation links – Link text labels visible while the sidebar is expanded (grey) lack sufficient contrast against the sidebar background (light grey); text/background additionally take on various colors (e.g. green text on grey background) upon pointer hover that may lack sufficient contrast * Dashboard, Search: "Search for a topic" field placeholder – Placeholder text (light blue) lacks sufficient contrast against its background (white). The placeholder is the only visible label text for the field. * Dashboard: Heading in Daily Practice Settings modal – Heading text (light grey) lacks sufficient contrast against its background (white) * Login, Create Account: Error message – Text (red) very slightly lacks sufficient contrast against its background (pink) * Create Account: Password strength message – Password strength message at certain states (e.g. yellow for "okay") may lack sufficient contrast against background (white) * Library, Playlists, Dashboard: Various link/component text – Text (typically grey) lacks sufficient contrast against background (white or light grey) – includes instances of blue text over grey background during hover states * Library, Video, Playlists, Quiz: Footer text – Text (grey), including heading and links, lacks sufficient contrast against the background (white or light grey) * Playlists: "Add" dialog text – Search field placeholder and "Recent searches" heading (light grey) lack sufficient contrast against their backgrounds (white) * Quiz: In dark mode, dialog text (light grey/light blue) may lack sufficient contrast against the background (white/light blue), and revealed answer keywords (white/light blue) lack sufficient contrast against the background (beige) * Quiz, Question Quiz Builder, Flashcards, Decks, Account: Various elements – Strings of text (including button labels) may lack sufficient contrast against background * Decks, Analytics: Various inputs – Placeholder text lacks sufficient contrast against its background (various shades of grey). The placeholder may be the only visible label text for the field. * Analytics: Selected tab – Selected tab text (blue) lacks sufficient contrast against its background (light grey) |
| [1.4.4: Resize Text](https://www.w3.org/TR/WCAG21/#resize-text) (AA)  Text can be enlarged up to 200% without loss of functionality. | Supports | Text may typically be scaled to 200% while preserving functionality of content. |
| [1.4.5: Images of Text](https://www.w3.org/TR/WCAG21/#images-of-text) (AA) Text is used rather than images of text, except where the presentation of text is essential, such as logos | Supports | No images of text are used other than for logos or essential presentation. |
| [1.4.10: Reflow](https://www.w3.org/TR/WCAG21/#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. In most instances page may be zoomed to 400% without necessitating horizontal scrolling, nor loss of functionality/content. For example: in Playlists, sidebar and content reflow in a single column; in Search, the "Also appears in" breadcrumb toggle and topic links may be removed at high zoom states on the search page, but the same information is readily available at the link target  **Exceptions:**   * All: Hamburger menu – At high zoom states, the top portion of the hamburger menu modal remains static (proportionally magnified) and does not scroll, and may obscure other content within the container. The close button to dismiss the container typically remains visible/usable. * Library: Secondary header – Secondary (sticky) header may obscure page content at very high zoom states * Flashcards: "Select topic" columns – Horizontal scrolling may be required to modify parent nodes in the topic selection at higher zoom levels (although this two-dimensional presentation is arguably essential) * Analytics: Sidebar – Sidebar collapses into an expandable widget at very high zoom states – however the expanded container is not scrollable, and the sticky expandable control may obscure other page control * Question Quiz Builder, Flashcards: Selected items cart summary – Sticky footer may obscure page content at very high zoom states |
| [1.4.11: Non-Text Contrast](https://www.w3.org/TR/WCAG21/#non-text-contrast) (AA)  User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s). | Partially supports | Most non-text UI components and graphical objects have at least a 3:1 contrast ratio against surrounding colors.  **Exceptions:**   * All: "Flashcard queue", "Question queue" buttons in header – Button icons (grey) lack sufficient contrast with background (light grey) during hover state * Dashboard: Daily Practice buttons – Icon buttons (light grey 'i' & cog buttons for FAQ & Daily Practice settings) lack sufficient contrast against their background (grey) * Dashboard: Toggle buttons in Daily Practice Settings modal – Buttons (grey/light grey) lack sufficient contrast to distinguish the state of the toggle, and against the background, in the un-toggled state * Playlists: "New Playlist" modal close button – Button icon (grey) and focus outline (light blue) lack sufficient contrast with background (white) |
| [1.4.12: Text Spacing](https://www.w3.org/TR/WCAG21/#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 least 0.12 times the font size;  Word spacing to at least 0.16 times the font size. | Supports | Users may adjust the text spacing of content on pages to the minimum baseline properties without causing loss of content or functionality. |
| [1.4.13: Content on Hover or Focus](https://www.w3.org/TR/WCAG21/#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 | Partially supports | Content that appears on hover or focus is occasionally found in the form of custom tooltips bearing supplementary component labels. Several are not properly dismissible, hoverable, or persistent according to the criteria.  **Exceptions:**   * All: "Playlists", "Flashcard queue", "Question queue" buttons in header – Tooltip on pointer hover is not hoverable nor dismissible according to the criteria * Dashboard: Daily Practice 'i' tooltip – Tooltip on pointer hover is not hoverable nor dismissible according to the criteria * Library: Item detail tooltip – Tooltips on pointer hover are not hoverable nor dismissible according to the criteria * Video: "Browse flashcards" modal components – Tooltip on pointer hover is not hoverable nor dismissible according to the criteria * Video: Time tooltip on player scrub bar – Tooltip on pointer hover is not hoverable nor dismissible according to the criteria * Analytics: "Data refresh rate" tooltip – Tooltip on pointer hover is not hoverable nor dismissible according to the criteria |
| [2.3.1: Three Flashes or Below Threshold](https://www.w3.org/TR/WCAG21/#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 | No flashing content exists. |

### Keyboard

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.2: Meaningful Sequence](https://www.w3.org/TR/WCAG21/#meaningfuusequence) (A)  The correct reading sequence can be programmatically determined | Partially supports | The correct reading sequence is largely logical and programmatically determinable, with the DOM order according with the visual order in most areas.  **Exceptions:**   * Search: Search filter selection – Expanded section for search filter selection, available on wider viewports/lower zoom, occurs before the search input field in the reading order despite its relative visual position below the field * Library, Playlists, Quiz, Search: Various menus – Popover content (e.g. “Share” menu) may not be available adjacent to the control in the sequential reading order (situated instead towards the end of the DOM), although focus is typically placed within the container at the point of activation |
| [2.1.1: Keyboard](https://www.w3.org/TR/WCAG21/#keyboard) (A)  All functionality is available from a keyboard, except for tasks such as drawing | Partially supports | Most standard web page content and functionality is keyboard operable. On certain pages, several interactive components, to varying degrees of consequence, are not included within the tab order.  **Exceptions**:   * Dashboard: Daily Practice 'i' tooltip – Tooltip cannot be activated via keyboard, and only triggers on pointer hover * Search: "Back" button – Element is not in the tabindex (i.e. not keyboard focusable), and is not implemented as a <button> although it activates a dialog * Search, Library, Video: "Also appears in" breadcrumb toggle – Element is not in the tabindex (i.e. not keyboard focusable), and is not implemented as a <button> * Search: Search result preview thumbnails – Icons indicating search result type, e.g. video or document, only appear on pointer hover and not keyboard focus (this information is otherwise not available in the search result) * Login: Reset password "Back to sign in" button – Element is not in the tabindex (i.e. not keyboard focusable), and is not implemented as a <button> * Library: "Add to playlist" button – Button to add individual item to playlists is only visible/available for activation on pointer hover. Equivalent functionality may be somewhat achieved by selecting an individual item checkbox and using the section's "Add to playlist" button. * Video: Video segment titles/previews – Tooltip displaying segment titles/previews on certain videos only occurs on pointer hover, and while similar information is available within a menu activated by the Chapter button, the menu options to jump to respective segments are not keyboard focusable/usable * Playlists: Quiz all menu options – Components are not keyboard focusable/usable * Quiz: Progress bar – Information represented by the colorful progress bar graphic is only available via tooltip on pointer hover. * Quiz: "Highlight Mode" – Highlight functionality requires pointer dragging action over quiz text * Quiz: Quiz image – Image is an interactive component (larger image activated via pointer click) that is not keyboard focusable/usable * Flashcards: "How to use Flashcards" banner close button – Component is not keyboard focusable – it is not implemented as a <button> * Flashcards: "Select topic" columns – Navigation and selection of components past the first column (i.e. child nodes) is not possible via keyboard operation * Decks: "Add flashcard" settings button – Interactive component to activate settings dialog is not keyboard focusable – it is not implemented as <button> element * Analytics: Tablist – Tabs are not keyboard focusable/operable * Analytics: "Data refresh rate" tooltip – Tooltip cannot be activated via keyboard, and only triggers on pointer hover * Analytics: Various components – Several controls (e.g. next/previous buttons for month in date picker, sort & accordion controls) are not keyboard focusable/operable |
| [2.1.2: No Keyboard Trap](https://www.w3.org/TR/WCAG21/#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](https://www.w3.org/TR/WCAG21/#character-key-shortcuts) (A)  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 | Single-key – including character key – shortcuts are enabled on Quiz and Video pages. On Video pages, keyboard shortcuts are only active while the video player or constituent components are in focus. While single-key shortcuts are present by default, they may be remapped to non-character keys. Turning off a key shortcut is possible via remapping another shortcut to the same key. Note: The number of default single-key shortcuts may exceed available non-character/non-printable keys. |
| [2.4.3: Focus Order](https://www.w3.org/TR/WCAG21/#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. Focus is managed logically and appropriately in many instances. For example: dialog/modal content often immediately receives focus upon activation, or is otherwise next in the tab order; activating sidebar navigation anchor links in Library pages shifts focus to the respective page sections  **Exceptions:**   * All: Topics popover – Container may (depending on page) visually resemble a modal yet lack appropriate focus management: focus may not be immediately placed within the menu when it is activated, nor is it trapped inside the activated container * Search, Library, Video: Breadcrumb topic links – Keyboard users can reach links that are in visually hidden/collapsed sections without first toggling the expanded state * Library: Collapse components – Components may receive keyboard focus while visually hidden in collapsed sections * Library, Playlists, Video, Quiz, Search: Various menus – While focus is appropriately placed within the container (e.g. "Share", "Flashcard settings”) at the point of activation, popover content occurs towards the end of the DOM – and (unexpectedly) between the floating Pendo button and footer content in the tab sequence * Video: Video selection section – In Firefox, it may not be possible to sequentially keyboard tab past a certain component within the Videos selection section * Flashcards: "How to use Flashcards" banner "Watch Video" – Video modal activated by "Watch Video" button lacks proper focus management – focus is not placed on the video player, and user may inadvertently initiate multiple video overlays via repeated button activation * Quiz: Quiz summary – Components are able to receive keyboard focus while visually hidden under the "More options" collapsed section * Decks: Buttons – The button to return to "Decks" (leftmost in the module header container) is situated in the tab order after "Quiz", "Save to queue", and "Options" to its right. * Analytics: Date picker dialog – Container lacks proper focus management: components in the activated container are not immediately situated next in the tab order |
| [2.4.7: Focus Visible](https://www.w3.org/TR/WCAG21/#focus-visible) (AA)  The page element with the current keyboard focus has a visible focus indicator | Partially supports | Almost all elements across the site have a decent visible indication of focus – the focus indicator is typically a prominent solid blue or black outline.  **Exceptions:**   * Dashboard, Search: "Search" button – Button lacks a visible keyboard focus indicator * Search: "Request a new video" button – Button lacks a visible keyboard focus indicator * Video: "Notes" figures zoom controls – Set of buttons to control image zoom may lack visible focus indicators * Video: Player scrub bar – Component lacks a visible focus indicator |
| [3.2.1: On Focus](https://www.w3.org/TR/WCAG21/#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

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.1: Information and Relationships](https://www.w3.org/TR/WCAG21/#info-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 many pages. Many input elements have programmatically determinable labels, although several inputs may not be programmatically associated with adjacent visible text labels. HTML sectioning elements/landmark roles demarcate content regions in some pages and areas.  **Exceptions:**   * All: Landmarks – Some pages lack landmarks to distinguish regions and sections of page content * Dashboard: Sidebar navigation links – Sidebar navigation link text labels are implemented as <h4> headings * Dashboard, Search: "Search for a topic" field – Input lacks a programmatically determinable label (field placeholder text does not suffice) * Dashboard: Section headings – Several elements inappropriately marked up as headings (i.e. only for presentational effect). Information in leaderboard is not presented in list markup; headings are used extraneously. * Search, Login, Decks, Account: First heading level – Page lacks <h1> * Search, Playlists: Search results list – Search results lack (unordered) list markup; each "Add to playlist"/"Add" button lacks the programmatically determined context of its respective item (or lacks a unique descriptive label to establish an association with the respective item). Topic breadcrumbs lack (ordered) list markup for sequences of hierarchical subject links. * Search: Search filter radio inputs – Two input elements are not programmatically associated with their label elements due to id attributes containing spaces, e.g. "Basic Sciences". Radio inputs are not grouped (e.g. contained within a fieldset or an element with group role). * Login, Create Account: Headings – Several issues with logical heading hierarchy: headings out of order, heading level skipped, heading used only for presentational effect * Login, Account, Decks: Input fields – Various inputs may lack programmatically determinable labels (field placeholder text does not suffice) – visible labels may not be programmatically associated * Library: Sidebar section links, section items – Arrays of items are organized visually in lists, yet lack list markup * Library, Playlists: Topics caret button – <button> encompasses page's main <h1> along with caret icon; heading loses semantic meaning and component lacks an appropriate descriptive label * Library, Account: Headings – Main content area has multiple <h1> elements for section headings, and skipped heading level <h2> * Playlists: Various input fields – "New Playlist" modal input & playlist title edit input lack programmatically determinable labels (field placeholder text does not suffice); possible adjacent label text may be marked up as a heading. * Playlists: "Add" dialog buttons – Search results lack (unordered) list markup, although each result has a heading <h4>; each "Add" button may lack the context of its respective item and does not bear a specific description/label. Topic breadcrumbs lack (ordered) list markup. * Quiz: Quiz summary modal – Heading hierarchy is not appropriate – all headings, including container's main heading, are <h3>. Sets of related button controls are not programmatically grouped (e.g. container lacks group role). * Quiz, Flashcards: Toggle, checkbox inputs – Components (e.g. "Elimination tool" toggle) may lack programmatically determinable labels – visible labels are not programmatically associated * Analytics: "Group by:" selection – Components – essentially radio buttons – are not grouped (e.g. contained within a fieldset or an element with group role), and not programmatically associated with the visible group label. * Analytics: "Search for cohort name", "Start Date"/"End Date" inputs – Inputs lack a programmatically determinable label * Analytics: Main landmark – Two <main> landmarks are present and are not distinguished via unique labels * Question Quiz Builder: "Max quiz size" selection – Input is not programmatically associated with its visible label * Question Quiz Builder: "Question Mode" radio inputs – Radio inputs are not grouped (e.g. contained within a fieldset or an element with group role). |
| [2.4.1: Bypass Blocks](https://www.w3.org/TR/WCAG21/#bypass-blocks) (A)  Users can bypass repeated blocks of content. | Partially supports | On many pages, a logical heading order and (less frequently) landmarks demarcating various content regions allow AT users to conveniently jump to different areas of content. Some navigation options are contained within expandable/collapsible menus (e.g. global hamburger menu). A “Skip to Main Content” skip navigation link is present on several pages (e.g. Account) but may not be functional due to incorrectly referencing the main content container id.  **Exceptions:**   * Many pages lack skip links to main content (or other significant sections), and some pages lack landmarks to distinguish content regions |
| [2.4.6: Headings and Labels](https://www.w3.org/TR/WCAG21/#headings-and-labels) (AA)  Headings and labels are clear and consistent. | Partially 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.  **Exceptions:**   * Dashboard: "Welcome Back" first heading – Heading text is potentially not sufficiently descriptive * Login, Create Account: Page heading – The main heading <h2>, "The best learning experience possible", is not descriptive of page topic/purpose |
| [3.1.1: Language of Page](https://www.w3.org/TR/WCAG21/#language-of-page) (A)  The language of the page is specified | Partially supports | The default page language is defined as lang="en" – appropriate when English is the user-selected language (from the global menu).  **Exceptions:**   * All: Page language – While Osmosis has a function to change the main page language, it is not reliably programmatically determinable when the page is set to a non-English language – the <html> element attribute remains lang="en" |
| [3.1.2: Language of Parts](https://www.w3.org/TR/WCAG21/#language-of-parts) (AA)  Specify the language of text passages that are in a different language than the default language of the page. | Does not support | When Spanish is the user-selected language, a few sections of text (e.g. “Summary” section on Video pages) may remain in English. The language of these parts may be indicated via heading labels but is typically not programmatically specified as differing from the language of the page. Note: default page language is consistently specified as lang="en" regardless of user language selection (see SC 3.1.1 above). |
| [4.1.1: Parsing](https://www.w3.org/TR/WCAG21/#parsing) (A)  Use valid, error-free HTML | Supports | All pages use and error-free HTML; HTML and CSS typically pass concerning these 4 specific criteria:   1. elements have complete start and end tags, 2. elements are nested according to their specifications 3. elements do not contain duplicate attributes 4. 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

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.5: Identify Input Purpose](https://www.w3.org/TR/WCAG21/#identify-input-purpose) (AA)  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. | Does not support | The only pages featuring applicable form elements that collect such information about the user are Login, Create Account, and Account. However, input fields on such pages relating to personal information, e.g. names and addresses, typically lack appropriate autocomplete attributes. |
| [2.4.2: Page Titled](https://www.w3.org/TR/WCAG21/#page-titled) (A)  The page has a title describing its topic or purpose | Partially supports | Some pages – notably Video pages – bear descriptive page titles that identifies content/purpose, e.g. “Myocardial Infarction: Video, Anatomy & Description | Osmosis”.  **Exceptions:**   * Various pages: Page title – Several pages lack missing descriptive/informative title; pages may be generically titled "Osmosis" |
| [2.4.4: Link Purpose (In Context)](https://www.w3.org/TR/WCAG21/#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:**   * Search, Playlists, Library: Breadcrumb topic links – Purpose of the sequence of links may be unclear – although some sequences may be preceded by accordion button "Also appears in". * Search: Search result transcript excerpt – Excerpt text (visible in wider viewports/lower zoom) links to same target as adjacent video title, although the excerpt is not descriptive of the destination |
| [2.5.3: Label in Name](https://www.w3.org/TR/WCAG21/#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. | Partially supports | Most user interface components that have visible text contain that text consistently within the accessible name.  **Exceptions:**   * Search: "Create new" button in playlist dialog – Button's accessible name is defined by aria-label attribute, i.e. "Create playlist", which does not accord with the visible label * All: Cookie notice banner "Cookie Policy" link – Link has an aria-label attribute, "More information about your privacy", that does not accord with link text * Library: Checkbox inputs – Components bear accessible names via aria-label attributes that may contain their visible label text (that is not programmatically associated), but prepend extraneous strings of generic text * Account: Input fields – Visible text labels for several inputs fields are overridden by aria-label attributes that do not contain/match the text in every instance |
| [3.2.4: Consistent Identification](https://www.w3.org/TR/WCAG21/#consistent-identification) (AA)  UI components used across the web site are identified consistently on every page. | Partially supports | Components that perform the same function across pages are almost always identified consistently.  **Exceptions:**   * All: Topics button – Component that activates Topics popover/dropdown panel bears slightly inconsistent labeling across various pages and sections, e.g. "Topics", "View All Topics", "Video Topics". On some pages, however, an instance of the component encloses the main <h1> and may have a nondescriptive/irrelevant label, e.g. "Anatomy, "Playlists". |
| [3.3.1: Error Identification](https://www.w3.org/TR/WCAG21/#error-identification) (A)  Input errors are clearly marked and described to the user. | Partially supports | In most instances, errors are identified and presented well visually. For many inputs, errors are typically validated upon form submission. On Login and Create Account pages, error messages that may offer specific feedback are presented on the page and visually distinguished via prominent text and background colors (red). The invalid inputs are also highlighted via color shifts to red. However, error states are usually not programmatically determinable or otherwise announced to AT.  **Exceptions:**   * Login: Error message – When both fields are left empty upon submission, the error message presented may be insufficiently specific: "Oops! Please fill out the required fields." Invalid inputs are identified via color change, but error states are not programmatically determinable. * Create Account: Input fields – Invalid or erroneous input may not result in an error message being displayed under certain circumstances (although focus management is always used to shift focus to first invalid input) * Playlists: "New Playlist" modal input field – Empty/invalid input is identified by a field color change (grey to red) upon submission, but not otherwise indicated programmatically or in text * Analytics: "Start Date"/"End Date" inputs – Input validation is seemingly conducted as values in the correct format are accepted, but no error identification occurs upon invalid input |
| [3.3.2: Labels or Instructions](https://www.w3.org/TR/WCAG21/#labels-or-instructions) (A)  Items requiring user input are clearly labeled or have clear instructions. | Partially supports | Labels or instructions are provided for most form elements, many of which are programmatically associated with their inputs.  Note: see SC 1.3.1 for exceptions where visible labels may not be programmatically associated with inputs.  **Exceptions:**   * Decks: "Add flashcard" rich text input – Instructions for input and operation of text editing components are sparse and not descriptive. An example of valid input/formatting ("Use {{double brackets}}…") is presented only as a visual placeholder that disappears after input or removal of focus. * Analytics: "Start Date"/"End Date" inputs – Input lacks instructions for the date values it expects in a specific format e.g. "25 Dec 2023" |
| [3.3.3: Error Suggestion](https://www.w3.org/TR/WCAG21/#error-suggestion) (AA)  When the user makes an input error, give suggestions for valid input. | Supports | Clear opportunities to provide error suggestions are uncommon, although relevant helpful suggestions are occasionally provided in text. For instance, while entering a new password in Create Account, input is dynamically validated against the set of password requirements. The user is advised succinctly on the password strength on a scale from “weak” to “strong” before form submission. If the form is submitted with an invalid chosen password, the error message summary will clearly restate the password requirements. |
| [4.1.2: Name, Role, Value](https://www.w3.org/TR/WCAG21/#name-role-value) (A)  For all UI components, the name, value, and role can be programmatically determined. | Partially supports | Some UI components communicate their state programmatically, and many have accessible names that are appropriately defined. For example, several button controls for expandable/collapsible content bear aria-expanded attributes. Several ARIA attributes and roles may not be present where appropriate.  **Exceptions:**   * All: Buttons in header – Several controls lack appropriate attributes to communicate state and the availability/type of interaction (e.g. aria-expanded, aria-haspopup). Icon buttons may feature superimposed badges with various numbers that are not available as part of the components' accessible names or descriptions. * All: Topics popover – Container that may (depending on page) visually resemble a modal lacks dialog role and aria-modal="true" attributes * All: Search suggestions – Search autocomplete lacks appropriate roles, states, and properties (e.g. listbox with descriptive aria-label) and suggestions may not be communicated well to AT * Search: "Add to playlist" button – Button lacks an accessible name during collapsed icon-only state (at high zoom) * Library, Playlists: Sidebar accordion buttons – Expand/contract chevron icon buttons lack accessible names. Similar "Expand all"/"Collapse all" component in the main content area may lack a label at high zoom (icon-only) states. * Dashboard, Video, Account, Quiz, Playlists, Login: Various modals & dialogs – Containers lack dialog roles and (for modals) aria-modal="true" attributes * Video, Analytics: Tablist – Tabs and tabbed content (e.g. in the right side section on Video pages) lack appropriate roles, states, and properties to operate well as a manually activated tablist * Video: Player option buttons – Several controls lack appropriate attributes to communicate state and the availability/type of interaction (e.g. aria-pressed, aria-expanded, aria-haspopup). Play/pause toggle's accessible name does not change to match player state. Volume slider lacks an accessible name. * Quiz: Quiz control buttons – Several controls lack appropriate attributes to communicate state (e.g. aria-pressed) * Flashcards: "Select topic" columns – Hierarchical content appears as a horizontally-oriented, multiple select tree – but lacks appropriate roles, states, and properties to work well as one * Analytics: Date picker dialog – Dialog lacks appropriate roles, states, and properties to operate well as a calendar grid/date picker for AT * Analytics: Charts – Chart <canvas> element lacks an accessible name or role * Question Quiz Builder: Caret expand buttons – Icon buttons lack accessible names |
| [4.1.3: Status Messages](https://www.w3.org/TR/WCAG21/#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. | Does not support | Status messages, while uncommonly encountered, are typically not announced by assistive technology.   * Login, Create Account: Error message – While focus management is utilized for error indication upon submission (focus is immediately placed on the first invalid input), the error message itself (or an appropriate equivalent) is not announced to AT * Create Account: Password strength message – Password strength is evaluated dynamically upon input, and a status message is visually presented next to the field label – but status is neither announced to AT nor programmatically associated with the input * Video, Playlists: Playlist item add/remove notification – Message is temporarily displayed within an overlay/toast container, but is not programmatically communicated to AT * Question Quiz Builder, Flashcards: Selected items cart summary – Tally of selected questions (e.g. number, time estimate) is automatically updated depending on user input selections but not announced to AT |

### Multimedia

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.2.1: Audio-only or Video-only (Prerecorded)](https://www.w3.org/TR/WCAG21/#audio-only-and-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. Video content is typically accompanied by a track of narrative audio. |
| [1.2.2: Captions (Prerecorded)](https://www.w3.org/TR/WCAG21/#captions-prerecorded) (A)  Provide captions for pre-recorded audio | Supports | Closed captions are typically provided for audiovisual content. Users may select from English or Spanish language captions via video player controls. Audiovisual content typically features an individual narrator whose speech is typically fully rendered in caption text. Note: very brief promotional outros may not be captioned. |
| [1.2.3: Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG21/#audio-description-or-media-alternative-prerecorded) (A)  Provide alternatives for pre-recorded synchronized audio/video | Supports | Comprehensive transcripts are readily available on Video pages. These transcripts represent the complete text of the closed captions pertaining to the respective topical video, along with appropriate section headings (e.g. “Summary”). Audiovisual content typically features an individual narrator whose speech is typically fully rendered in caption text; the narration is explanatory of the respective topic, and highly descriptive of the animated illustrations and other diagrammatic information represented via video content. Minor instances of visual information (parts of animations depicting specific biological processes) or non-speech sounds (e.g. sound effects) may not be exhaustively described via narration or transcript text. |
| [1.2.4: Captions (Live)](https://www.w3.org/TR/WCAG21/#captions-live) (AA)  Provide captions for live audio in synchronized audio/video. | Supports (N/A) | There is no live audio content in synchronized media. |
| [1.2.5: Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG21/#audio-description-prerecorded) (AA)  Provide an audio description of pre-recorded video. | Partially supports | A secondary audio track with comprehensive/extended audio description (or other method) is not provided for audiovisual content on Video pages. However, audiovisual content typically features an individual narrator thoroughly explaining the respective topic – speech audio is highly descriptive of the animated illustrations and other diagrammatic information represented via video content. Minor instances of visual information (parts of animations depicting specific biological processes) may not be exhaustively described via narration. |
| [1.4.2: Audio Control](https://www.w3.org/TR/WCAG21/#audio-control) (A)  Audio can be paused and stopped, or the audio volume can be changed. | Supports | No pages feature audio that plays automatically. The video player on Video pages only initiates playback on user interaction, and features pause/stop and volume controls. |
| [2.2.2: Pause, Stop, Hide](https://www.w3.org/TR/WCAG21/#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

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [2.2.1: Timing Adjustable](https://www.w3.org/TR/WCAG21/#pause-stop-hide) (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 no session timeout to which the criterion is applicable; the time limit is longer than 20 hours. |
| [2.4.5: Multiple Ways](https://www.w3.org/TR/WCAG21/#multiple-ways) (AA)  More than one way is available to navigate to other web pages. | Supports | All pages (except steps/results of a process) may typically be located and accessed in multiple ways. For example, main navigation (global menu & hamburger menu) is consistently available across pages, and secondary navigation is often present (e.g. in the form of breadcrumb trails representing topic hierarchy on Video pages). Global search functionality that comprehensively indexes content across the site allows users to find specific Video pages. The extensive “Video Topics” menu leading to the topical Library pages is readily available via main navigation, and taxonomically organizes Video pages. Users may also compile Playlists to curate custom sets of Video pages. |
| [3.2.2: On Input](https://www.w3.org/TR/WCAG21/#on-input) (A)  Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context. | Partially supports | User input, such as changing the values of form elements, does not initiate unexpected actions or changes in context in almost all instances.  **Exceptions:**   * Search: Search filter radio inputs – Selecting a radio button immediately initiates a page content change corresponding to the active filter |
| [3.2.3: Consistent Navigation](https://www.w3.org/TR/WCAG21/#consistent-navigation) (AA)  Navigation menus are in the same location and order on every web page. | Supports | Navigation menus are consistent across pages. For example, main navigation (global & hamburger menu) is consistent across pages, with links occurring in the same order; secondary navigation is consistently positioned across appropriate sets of pages. |
| [3.3.4: Error Prevention (Legal, Financial, Data)](https://www.w3.org/TR/WCAG21/#error-prevention-legaufinanciaudata) (AA)  For web pages with legal or financial commitments, input can be reviewed and corrected before final submission, and submissions can be reverted. | Supports | There are no submissions which require legal or financial commitments for an institutional user. The order confirmation process for the purchase of an individual Osmosis Membership (not otherwise reviewed in this ACR) permits the user to clearly review the intended purchase, including selected term and pricing – and provides a checkbox in addition to a submit button. |

### Mobile User Experience

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| **WCAG 2.1**  **Checkpoint** | **Conformance Level** | **Remarks** |
| [1.3.4: Orientation](https://www.w3.org/TR/WCAG21/#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](https://www.w3.org/TR/WCAG21/#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](https://www.w3.org/TR/WCAG21/#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](https://www.w3.org/TR/WCAG21/#motion-actuation) (A)  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 | There is no content that utilizes device or user motion. |