

High-Level Accessibility Evaluation (WCAG 2.1)

Overdrive

September 21, 2022

Prepared for:

BTAA-Library Accessibility Alliance

Prepared by:

Emily Mason, UX Researcher
User-Experience Laboratory
CCI Research & Innovation Center (RIC)
University of Tennessee
uxl@utk.edu

Primary Point of Contact:

Amy Forrester, RIC Assistant Director
aforres4@utk.edu

TABLE OF CONTENTS

SUMMARY	3
Top Findings	3
Best Practices	3
ACCESSIBILITY FINDINGS	1
1. Initial Interface	1
2. Search Results	4
3. Individual Results	7
Read a Sample	11
4. Audio Book	11

SUMMARY

This report reflects the findings of a high-level assessment of Overdrive for its conformance with the W3C Web Content Accessibility Guidelines version 2.1 (WCAG 2.1).

There are very few WCAG 2.1 compliance issues with Overdrive, and the few that are present are programmatic in nature and should be relatively easy to fix. However, creating an accessible platform is a constantly moving goalpost, so it is important to keep in mind that there are continual updates to the WCAG standards that may require more work in the future. Below are the most critical issues to focus on correcting to improve access for all potential users of the system.

Top Findings

1. **Compatibility:** The biggest issue facing Overdrive is compatibility of the system with ARIA. These are primarily programmatic issues that aren't visible on the surface, but that were returned on automatic analysis for each of the pages reviewed. Some of these issues will need manual review by a developer alongside an accessibility professional in order to determine the severity of the issue. For an in-depth guide to ARIA implementation, please see the [WAI-ARIA Authoring Best Practices Guide from W3](#).
2. **Information and Relationships:** There are minor issues with the information and relationships of the site, but there are very few of them and they should be very easy to fix.
3. **Color Contrast:** Color contrast is not a critical issue for this site, however there are some color combinations that result in the contrast ratio falling below the AA standard of 1:4.5 for normal text. The automatic analysis also had trouble determining if there were contrast issues on certain areas of each page and flagged them for manual review. A cursory analysis suggests that these colors are not creating a contrast issue, but they should be reviewed manually for accuracy.

Best Practices

- ◆ Document should have one main landmark.
- ◆ All page content should be contained within landmarks.
- ◆ Ensure landmarks are unique.
- ◆ ARIA role should be appropriate for the element.
- ◆ Elements of role none or presentation should be flagged.
- ◆ Form elements should have a visible label.
- ◆ id attribute value must be unique.
- ◆ Links with the same name must have a similar purpose.
- ◆ Page should contain a level-one heading

ACCESSIBILITY FINDINGS

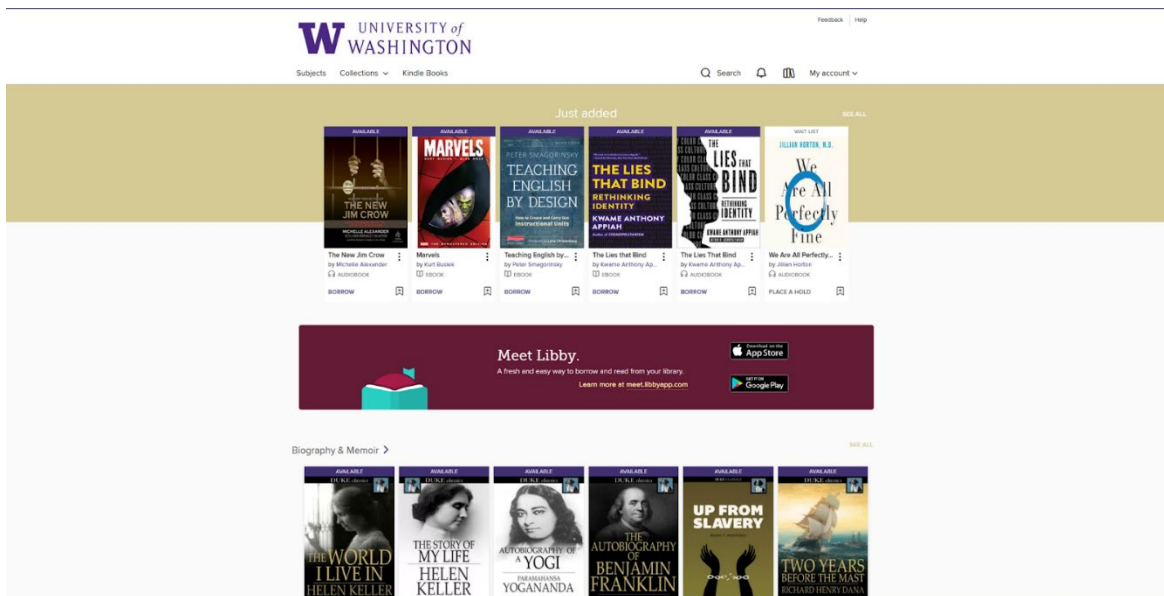
This report was conducted against Overdrive and covers a selection of pages and features that were to be tested as a representative sample of the database's conformance to the WCAG 2.1 AA standards.

The resource was reviewed using a combination of manual and automatic review tools and assistive technologies, including the WAVE Accessibility Assessment tool, Axe Accessibility Assessment tool, WCAG Color Contrast Checker, and NVDA screen reader. All problems identified by automatic tools were double checked manually. This evaluation was performed using Firefox on Windows 10.

Below are the findings revealed during the accessibility evaluation of Overdrive.

1. Initial Interface

Test Case: Test initial interface/landing page to ensure menus, sub-menus, search box, images, icons, etc. are accessible.



- SC 1.3.1:** elements must be contained in a or .
- .Nav-bottomLeftLinksWrapper > li:nth-child(1)
 - .Nav-collectionsDropLink
 - .Nav-bottomLeftLinksWrapper > li:nth-child(3)

Flagged Issues

- List item does not have a , parent element without a role, or a role="list"

SC 1.3.1: Certain ARIA roles must contain particular children.

- .div[aria-labelledby="myaccount"]
- div[aria-labelledby="help"]
- div[aria-labelledby="stay-connected"]

Flagged Issues

- Invalid ARIA attribute name: aria-autoclose

SC 1.4.3: Elements must have sufficient color contrast.

- 16 instances/locations throughout the page.

Flagged Issues

- Element has insufficient color contrast of 1.65 (foreground color: #ffffff, background color: #d5ca94, font size: 21.0pt (28px), font weight: normal). Expected contrast ratio of 3:1
- Element has insufficient color contrast of 1.58 (foreground color: #d5ca94, background color: #fafafa, font size: 10.5pt (14px), font weight: normal). Expected contrast ratio of 4.5:1
- Element's background color could not be determined because it's partially obscured by another element

SC 4.1.1: id attribute value must be unique.

- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg
- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg > g:nth-child(2)
- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg > g:nth-child(3)
- .notificationDotContainer.mobile.secondary-background
- .footer-desktop > footer > .footer.row[aria-hidden="false"]
- .footer.row[aria-hidden="false"] > .support-choice-modal.medium.reveal-modal
- .footer.row[aria-hidden="false"] > .support-choice-modal.medium.reveal-modal > .modal-header > .modal-title.primary-color.js-first-focus

Flagged Issues

- Document has multiple static elements with the same id attribute: notify-ringer
- Document has multiple static elements with the same id attribute: ringer
- Document has multiple static elements with the same id attribute: bell
- Document has multiple static elements with the same id attribute: dot

- Document has multiple static elements with the same id attribute: footer
- Document has multiple static elements with the same id attribute: support-choice-modal
- Document has multiple static elements with the same id attribute: cancel-hold-modal-title

SC 4.1.1: IDs used in ARIA labels must be unique.

- `.large-12[aria-labelledby="copyright"][role="list"] > .copyright`

Flagged Issues

- Document has multiple elements referenced with ARIA with the same id attribute: copyright

SC 4.1.1: IDs of active elements must be unique.

- `div[aria-labelledby="myaccount"] > ul > li:nth-child(7) > a[href$="sign-out"]`
- `.footer-links > ul > li[role="listitem"]:nth-child(1) > a[target="_blank"]`
- `.footer-links > ul > li[role="listitem"]:nth-child(2) > a[data-reveal-id="support-choice-modal"][href="#"]`
- `span:nth-child(2) > a[aria-label="Powered by OverDrive"][target="_blank"]`

Flagged Issues

- Document has active elements with the same id attribute: footer-account-sign-out
- Document has active elements with the same id attribute: footer-help-troubleshooting
- Document has active elements with the same id attribute: footer-help-support
- Document has active elements with the same id attribute: footer-overdrive

SC 4.1.2: ARIA attributes must conform to valid names.

- `Nav-collectionsLink`

Flagged Issues

- Invalid ARIA attribute name: `aria-autoclose`

SC 4.1.2: ARIA hidden elements must not be focusable or contain focusable elements.

- `.LibbyTout`

Flagged Issues

- Focusable content should have `tabindex='-1'` or be removed from the DOM

SC 4.1.2: Elements must only use allowed ARIA attributes.

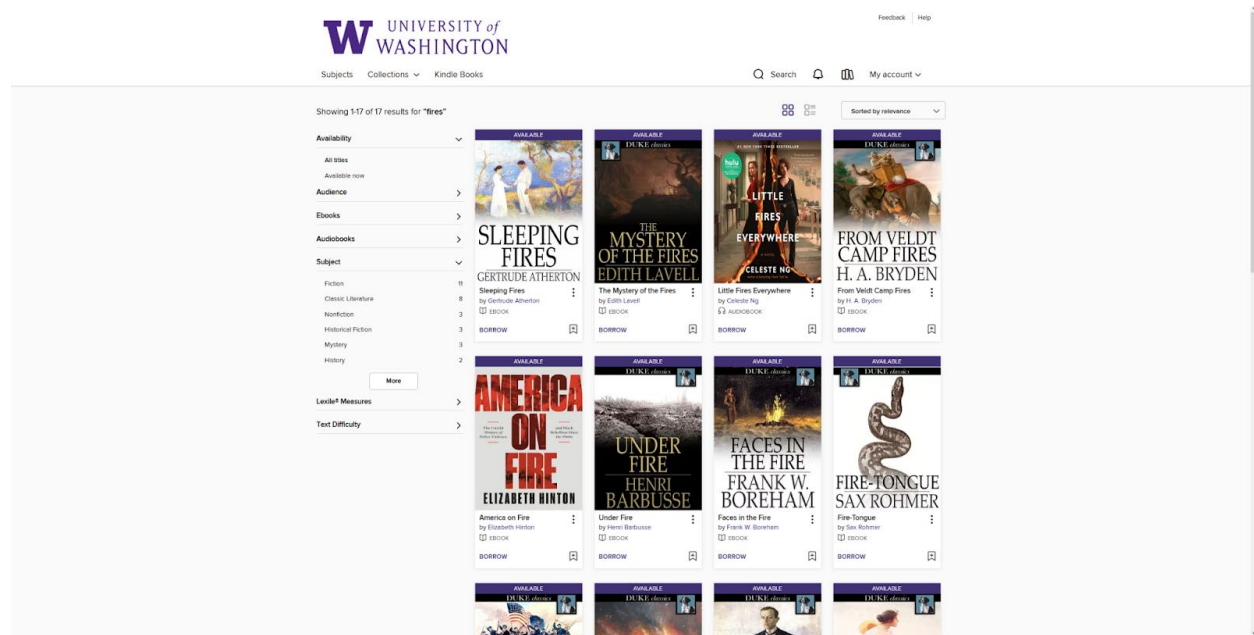
- `.footer-right.right > .Footer-kindle[target="_blank"] > .Footer-kindle-logo.icon-kindle-logo[aria-label="Kindle Books"]`

Flagged Issues

- aria-label attribute cannot be used on a li with no valid role attribute.

2. Search Results

Test Case: From the initial landing page, conduct a search for: fires. Test search results page, including filters/refine search (filter by fiction & available now) and sort by options.



SC 1.3.1: elements must be contained in a or .

- .Nav-bottomLeftLinksWrapper > li:nth-child(1)
- .Nav-collectionsDropLink
- .Nav-bottomLeftLinksWrapper > li:nth-child(3)
- .is-desktop > .Pagination-itemsContainer[aria-label="Pagination"][role="navigation"] > .Pagination-itemContainer.is-current.primary-color

Flagged Issues

- List item does not have a , parent element without a role, or a role="list"

SC 1.3.1: Certain ARIA roles must contain particular children.

- .div[aria-labelledby="myaccount"]
- div[aria-labelledby="help"]
- div[aria-labelledby="stay-connected"]

Flagged Issues

- Invalid ARIA attribute name: aria-autoclose

SC 1.4.3: Elements must have sufficient color contrast.

- 6 instances/locations throughout the page.

Flagged Issues

- Element has insufficient color contrast of 1.65 (foreground color: #ffffff, background color: #d5ca94, font size: 21.0pt (28px), font weight: normal). Expected contrast ratio of 3:1
- Element has insufficient color contrast of 1.58 (foreground color: #d5ca94, background color: #fafafa, font size: 10.5pt (14px), font weight: normal). Expected contrast ratio of 4.5:1
- Element's background color could not be determined because it's partially obscured by another element
- Element content is too short to determine if it is actual text content

SC 4.1.1: id attribute value must be unique.

- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg
- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg > g:nth-child(2)
- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg > g:nth-child(3)
- .notificationDotContainer.mobile.secondary-background
- .Results-heading
- .footer-desktop > footer > .footer.row[aria-hidden="false"]
- .footer.row[aria-hidden="false"] > .support-choice-modal.medium.reveal-modal
- .footer.row[aria-hidden="false"] > .support-choice-modal.medium.reveal-modal > .modal-header > .modal-title.primary-color.js-first-focus

Flagged Issues

- Document has multiple static elements with the same id attribute: notify-ringer
- Document has multiple static elements with the same id attribute: ringer
- Document has multiple static elements with the same id attribute: bell
- Document has multiple static elements with the same id attribute: dot
- Document has multiple static elements with the same id attribute: main
- Document has multiple static elements with the same id attribute: footer
- Document has multiple static elements with the same id attribute: support-choice-modal
- Document has multiple static elements with the same id attribute: cancel-hold-modal-title

SC 4.1.1: IDs used in ARIA labels must be unique.

- `.large-12[aria-labelledby="copyright"][role="list"] > .copyright`

Flagged Issues

- Document has multiple elements referenced with ARIA with the same id attribute: copyright

SC 4.1.1: IDs of active elements must be unique.

- `div[aria-labelledby="myaccount"] > ul > li:nth-child(7) > a[href$="sign-out"]`
- `.footer-links > ul > li[role="listitem"]:nth-child(1) > a[target="_blank"]`
- `.footer-links > ul > li[role="listitem"]:nth-child(2) > a[data-reveal-id="support-choice-modal"][href="#"]`
- `span:nth-child(2) > a[aria-label="Powered by OverDrive"][target="_blank"]`

Flagged Issues

- Document has active elements with the same id attribute: footer-account-sign-out
- Document has active elements with the same id attribute: footer-help-troubleshooting
- Document has active elements with the same id attribute: footer-help-support
- Document has active elements with the same id attribute: footer-overdrive

SC 4.1.2: ARIA attributes must conform to valid names.

- `Nav-collectionsLink`

Flagged Issues

- Invalid ARIA attribute name: aria-autoclose

SC 4.1.2: ARIA hidden elements must not be focusable or contain focusable elements.

- `.LibbyTout`

Flagged Issues

- Focusable content should have `tabindex='-1'` or be removed from the DOM

SC 4.1.2: Elements must only use allowed ARIA attributes.

- `.footer-right.right > .Footer-kindle[target="_blank"] > .Footer-kindle-logo.icon-kindle-logo[aria-label="Kindle Books"]`
- ARIA attribute is not allowed: `aria-expanded="true"`
- `li[data-facet-container="ebook"]`
- `li[data-facet-container="audiobook"]`
- `li[data-facet-container="subjects"]`
- `span[aria-label="Filter search results."]`

- span[aria-label="Applied filters."]
- li[data-facet-container="lexileScores"]
- li[data-facet-container="gradeLevels"]
- span[aria-label="Applied filters."]
- .collapse.row[aria-label="Title availability filters"]

Flagged Issues

- aria-label attribute cannot be used on a i with no valid role attribute.
- ARIA attribute is not allowed: aria-expanded="true"
- ARIA attribute is not allowed: aria-expanded="false"
- aria-label attribute is not well supported on a span with no valid role attribute.
- aria-label attribute is not well supported on a div with no valid role attribute.

3. Individual Results

Test Case: Test individual search result landing page for ebook and test ebook text via “read a sample”



SC 1.3.1: elements must be contained in a or .

- .TitleDetailsDescription-infoTabs

Flagged Issues

- List element has direct children with a role that is not allowed: presentation

SC 1.3.1: and must only directly contain , <script>, or <template> elements.

- .Nav-bottomLeftLinksWrapper > li:nth-child(1)
- .Nav-collectionsDropLink

- .Nav-bottomLeftLinksWrapper > li:nth-child(3)
- .is-desktop > .Pagination-itemsContainer[aria-label="Pagination"][role="navigation"] > .Pagination-itemContainer.is-current.primary-color

Flagged Issues

- List item does not have a , parent element without a role, or a role="list"

SC 1.3.1: Certain ARIA roles must contain particular children.

- .div[aria-labelledby="myaccount"]
- div[aria-labelledby="help"]
- div[aria-labelledby="stay-connected"]

Flagged Issues

- Invalid ARIA attribute name: aria-autoclose

SC 1.4.1: Color should not be the only visual means of conveying information.

- <button data-media-id="5799546" data-type="ebook" data-type-name="ebook" tabindex="0" aria-label="Borrow America on Fire" class="TitleActionButton u-allCaps button radius is-button secondary is-borrow js-borrow secondary">Borrow</button>

Flagged Issues

- The change in state of this button is only conveyed using a very subtle change in color, it should also have a focus ring.

SC 1.4.3: Elements must have sufficient color contrast.

- 11 instances/locations throughout the page.

Flagged Issues

- Element has insufficient color contrast of 1.65 (foreground color: #ffffff, background color: #d5ca94, font size: 21.0pt (28px), font weight: normal). Expected contrast ratio of 3:1
- Element has insufficient color contrast of 1.58 (foreground color: #d5ca94, background color: #fafafa, font size: 10.5pt (14px), font weight: normal). Expected contrast ratio of 4.5:1
- Element's background color could not be determined because it's partially obscured by another element
- Element's background color could not be determined due to a pseudo element

SC 3.1.2: lang attribute must have a valid value.

- .subtitle

Flagged Issues

- Value of lang attribute not included in the list of valid languages

SC 4.1.1: id attribute value must be unique.

- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg
- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg > g:nth-child(2)
- .MobileNav-iconContainer > .js-notificationsButton.bell-icon-container[aria-label="Notifications"] > svg > g:nth-child(3)
- .notificationDotContainer.mobile.secondary-background
- .footer-desktop > footer > .footer.row[aria-hidden="false"]
- .footer.row[aria-hidden="false"] > .support-choice-modal.medium.reveal-modal
- .footer.row[aria-hidden="false"] > .support-choice-modal.medium.reveal-modal > .modal-header > .modal-title.primary-color.js-first-focus

Flagged Issues

- Document has multiple static elements with the same id attribute: notify-ringer
- Document has multiple static elements with the same id attribute: ringer
- Document has multiple static elements with the same id attribute: bell
- Document has multiple static elements with the same id attribute: dot
- Document has multiple static elements with the same id attribute: footer
- Document has multiple static elements with the same id attribute: support-choice-modal
- Document has multiple static elements with the same id attribute: cancel-hold-modal-title

SC 4.1.1: IDs used in ARIA labels must be unique.

- .large-12[aria-labelledby="copyright"][role="list"] > .copyright
- div[aria-labelledby="description"]

Flagged Issues

- Document has multiple elements referenced with ARIA with the same id attribute: copyright
- Document has multiple elements referenced with ARIA with the same id attribute: title-description

SC 4.1.1: IDs of active elements must be unique.

- div[aria-labelledby="myaccount"] > ul > li:nth-child(7) > a[href\$="sign-out"]
- .footer-links > ul > li[role="listitem"]:nth-child(1) > a[target="_blank"]
- .footer-links > ul > li[role="listitem"]:nth-child(2) > a[data-reveal-id="support-choice-modal"][href="#"]

- `span:nth-child(2) > a[aria-label="Powered by OverDrive"] [target="_blank"]`

Flagged Issues

- Document has active elements with the same id attribute: footer-account-sign-out
- Document has active elements with the same id attribute: footer-help-troubleshooting
- Document has active elements with the same id attribute: footer-help-support
- Document has active elements with the same id attribute: footer-overdrive

SC 4.1.2: ARIA attributes must conform to valid names.

- Nav-collectionsLink

Flagged Issues

- Invalid ARIA attribute name: aria-autoclose

SC 4.1.2: ARIA hidden elements must not be focusable or contain focusable elements.

- .LibbyTout

Flagged Issues

- Focusable content should have `tabindex='-1'` or be removed from the DOM

SC 4.1.2: Elements must only use allowed ARIA attributes.

- `.footer-right.right > .Footer-kindle[target="_blank"] > .Footer-kindle-logo.icon-kindle-logo[aria-label="Kindle Books"]`
- #description
- #format-details
- #reviews
- `span[aria-label="Kindle Book"]`
- `span[aria-label="OverDrive Read"]`
- `span[aria-label="EPUB ebook"]`
- `span[aria-label="English"]`

Flagged Issues

- `aria-label` attribute cannot be used on a `i` with no valid role attribute.
- ARIA attribute is not allowed: `aria-expanded="true"`
- ARIA attribute is not allowed: `aria-expanded="false"`
- `aria-label` attribute is not well supported on a `span` with no valid role attribute.

Read a Sample

- “Read a sample” does work with the screen reader, but it is not easy to use. The navigation menu was only found by randomly clicking. The popup informing the user as to which key to press to start the reader was not legible during this test. The sample should have clear, visible controls and instructions on how to use them that are also screen readable.

4. Audio Book

Test Case: Test audio book (ex: <https://uwashington.overdrive.com/media/3165902>) & listen to sample

- This analysis would take additional time as the Success Criteria for Time-based Media are complex. On a quick review, it seems like there should be captions or a text transcript included with the audio book sample.

Disclaimer: This high-level evaluation was conducted for the Library Accessibility Alliance, and represents a good faith effort conducted within a limited time frame. It should not be assumed to be complete or free from error. No warranties or guarantees are implied. UT is not responsible for direct, indirect, or incidental damages based on this work; its use or interpretation by any individual, group, or organization; or on conditions beyond our control.