High-level accessibility review - BTAA
(Project Muse Platform)

Primary Point of Contact

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Project Muse Platform

Summary

Top 3 problems for the Project Muse Platform

This assessment covers portions of the Project Muse platform. The assessment revealed some problems with screen reader compatibility, resulting in screen reader users sometimes missing critical information needed to understand how to operate the features.

1. **Color –** the colors used in the site have combinations that fail the required ratio for regular text of 4.5:1. People who have low vision or are colorblind may have difficulty reading text if the contrast between the text its background is insufficient. When the contrast ratio between text and its background is adequate, people who have low vision or are colorblind are more likely to be able to read the text.
2. **Link Keyboard Focus –** there are multiple links with no href so they are hidden from keyboard users. Links made from <a> elements must have an href attribute to be valid hyperlinks. Without an href attribute, screen readers will not know that the text within the <a> element is a hyperlink and it will not be keyboard focusable.
3. **Labels –** the form controls are not always labelled in a meaningful way or at all. People who are blind cannot use the visual layout of a form to determine which labels go with which form elements. In order to be certain which label goes with which form element, the label and form element must be programmatically associated. When labels and form elements are programmatically associated, a screen reader user can put focus on a form element and the screen reader will automatically read the label and element type together. In addition, some coding methods will create a larger clickable area for the form element which benefits people with motor disabilities.

Accessibility findings

Project wide issues

The issues presented in this section were identified in multiple pages and are recorded here to avoid repetition. These are applicable to each screen. Due to particularities, similar issues are still reported on a page per page basis, where applicable.

Automated findings using Axe

Issues found through automated testing come from the Axe plugin, an open source accessibility testing tool that is available for Firefox and Chrome. Details here: https://www.deque.com/products/axe/.

1. **SC 1.4.3** - Elements must have sufficient color contrast, yellow and white gives a contrast ratio of 1.66
2. **SC 1.4.3** - Elements must have sufficient color contrast, light blue and white gives the contrast ratio 2.85:1
3. **SC 1.4.3** - Elements must have sufficient color contrast, orange and white gives a contrast ratio of 3.2:1

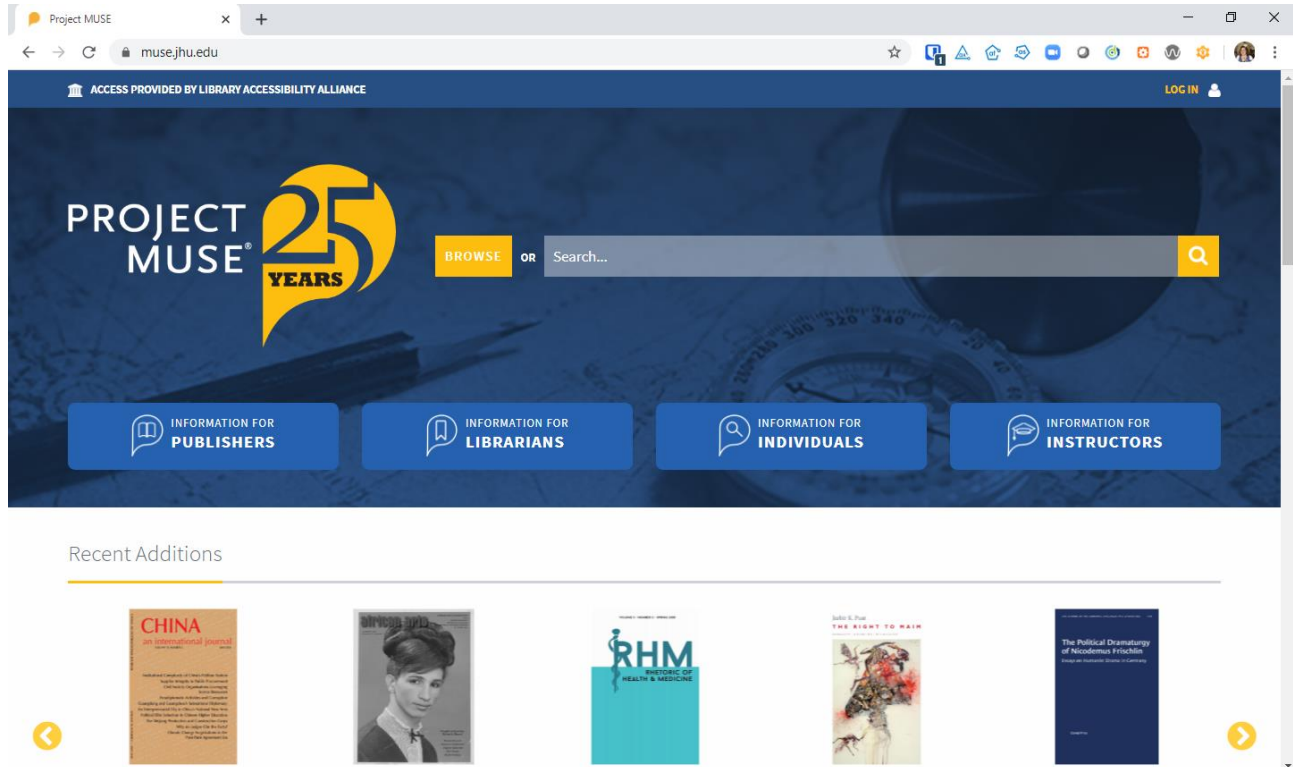### Additional manual findings using NVDA screen reader

1. **SC 1.4.3 –** Hovered links have a low contrast ratio of 2.83:1 as use the blue #2ba6cb with a white background
2. **SC 1.4.3 –** Initial hovered link "ACCESS PROVIDED BY…" changes to blue #258FAF on a dark blue background giving the contrast ratio 2.21:1
3. **SC 3.3.2 –** Label is not persistently shown for the search field when data is entered
4. **SC 4.1.2 –** Search link (made to look like a button) does not have a valid href so not keyboard accessible

5. **SC 1.3.1** – The heading structure is not in sequential order starting with an H1 to structure the page sections

1. Project Muse Landing Page

Source: https://muse.jhu.edu/
Test case: Test initial interface/landing page to ensure menus, search box, images, icons, sort by, etc.

are accessible.

Automated findings using Axe
1. **SC 1.4.3** - Elements must have sufficient color contrast, orange and off-white gives a contrast ratio of 3.18:1
2. **SC 1.4.3** - Elements must have sufficient color contrast, light blue and off-white gives the contrast ratio 2.83:1
3. **SC 1.4.3** - Elements must have sufficient color contrast, red and white gives the contrast ratio 3.99:1
4. **SC 1.4.3** - Elements must have sufficient color contrast, light blue and off-white gives the contrast ratio 2.8:1

Additional manual findings using NVDA screen reader
1. **SC 2.4.7** – The previous and next buttons have a barely visible keyboard focus indicator
2. **SC 1.4.1** – Links in the MUSE News only use a change of color to indicate they are links visually and vary in a ratio of less than 3:1 with the surrounding text

2. Project Muse Results Page

Source:
https://muse.jhu.edu/search?action=search&query=content:perry%20mason:and&min=1&max=10&t=header

Test case: From the initial interface, perform a search for: "perry mason". Test results page, including Filter and sort by options. Test Filter Results by limiting results to the Content Type (Articles) and Journal (Canadian Theatre Review).

Automated findings using Axe

1. **SC 4.1.1 -** id attribute value must be unique
2. **SC 1.3.1** - and <ol> must only directly contain <li>, <script> or <template> elements
3. **SC 1.4.3** - Elements must have sufficient color contrast, grey and white text combinations give the contrast ratio of 2.76:1

Additional manual findings using NVDA screen reader

1. **SC 4.1.2** – The menu that expands or collapses does not share it programmatically with the screen reader
2. **SC 4.1.2** – The links "Add Field" and "Search" are not assigned an href so are not keyboard accessible
3. **SC 1.3.1** – Radio buttons and checkboxes are not grouped by the owning label using a fieldset and legend
4. **SC 1.3.1** – Groups of radio buttons and checkboxes are in lists rather than using the correct semantics for groups of form controls
5. **SC 3.3.2** – Labels are not persistent for form controls as rely on placeholder text or visual location
6. **SC 1.3.1** – The checkboxes are not labelled with the visual label for each checkbox, instead you hear a hidden label applied to all checkboxes
7. **SC 1.1.1** – The cover images of each book has the same alt tag that is not descriptive in context to the image.
8. **SC 1.3.1** – The list of results does not contain the exact number of results as partially loads the list until the user is at the bottom of the page.

3. Courting Truth Article

Source: https://muse.jhu.edu/article/380649

Test case: Test an individual search result page (Courting Truth: A Meditation on Lawyer Shows, the Public Expectation of Lawyers, and Techniques of Persuasion in an Episodic World).

Automated findings using Axe

1. **SC 4.1.2** - ARIA roles used must conform to valid values
2. **SC 1.4.3 -** Elements must have sufficient color contrast, grey text on white gives the contrast ratio 3.75: 1
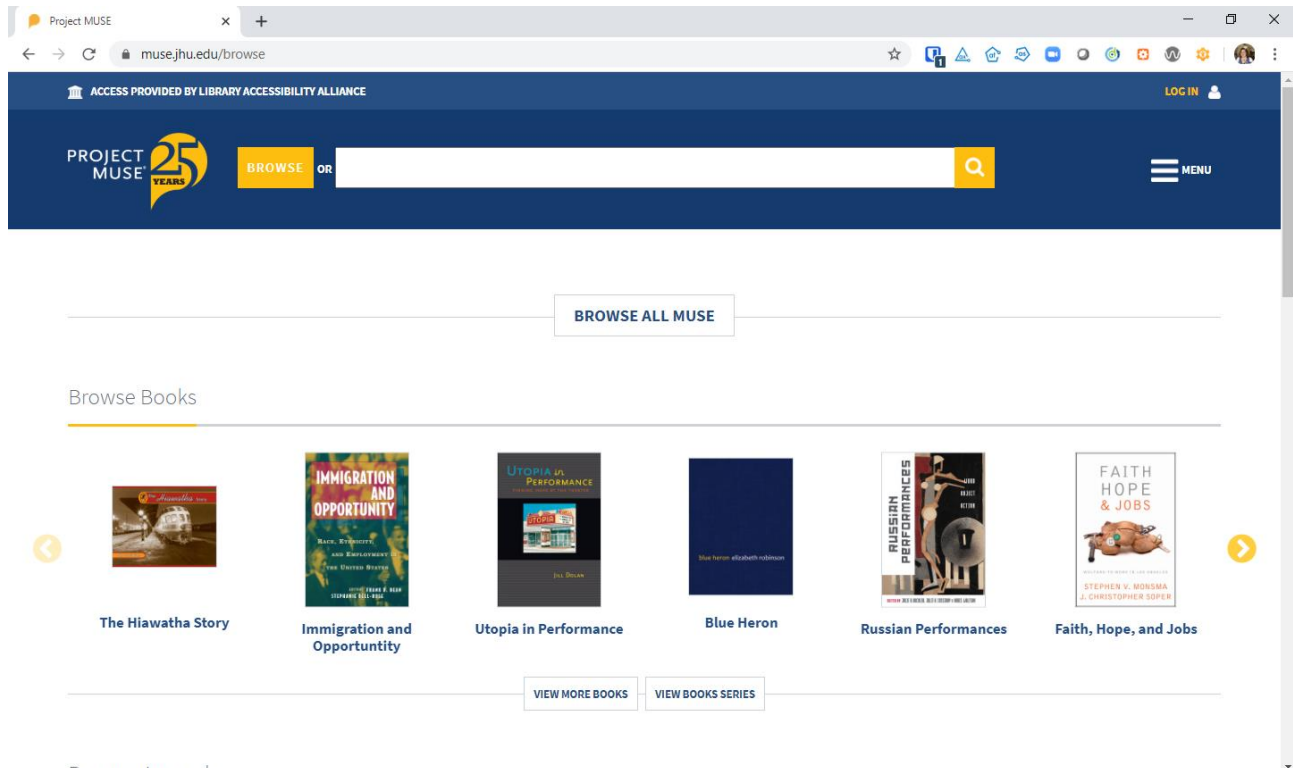3. **SC 1.3.1** - and <ol> must only directly contain <li>, <script> or <template> elements

Additional manual findings using NVDA screen reader

1. **SC 1.1.1 –** Image links to expand the images have no alternative text
2. **SC 2.4.3** – Opening modals of images does not move focus to the modal (it cannot be focused at all with the keyboard)
3. **SC 2.4.3** – Closing the modals does not return the focus to the items that triggered the modal but to the top of the page
4. **SC 2.1.1** – Adding more Social Media list cannot be focused or opened with the keyboard

4. Browse Page

Source: https://muse.jhu.edu/browse

Test case: Test Browse page (linked from initial landing page)

Automated findings using Axe
1. **SC 1.4.3** - Elements must have sufficient color contrast, light blue and off-white gives the contrast ratio 2.8:1
2. **SC 4.1.2** - id attribute value must be unique

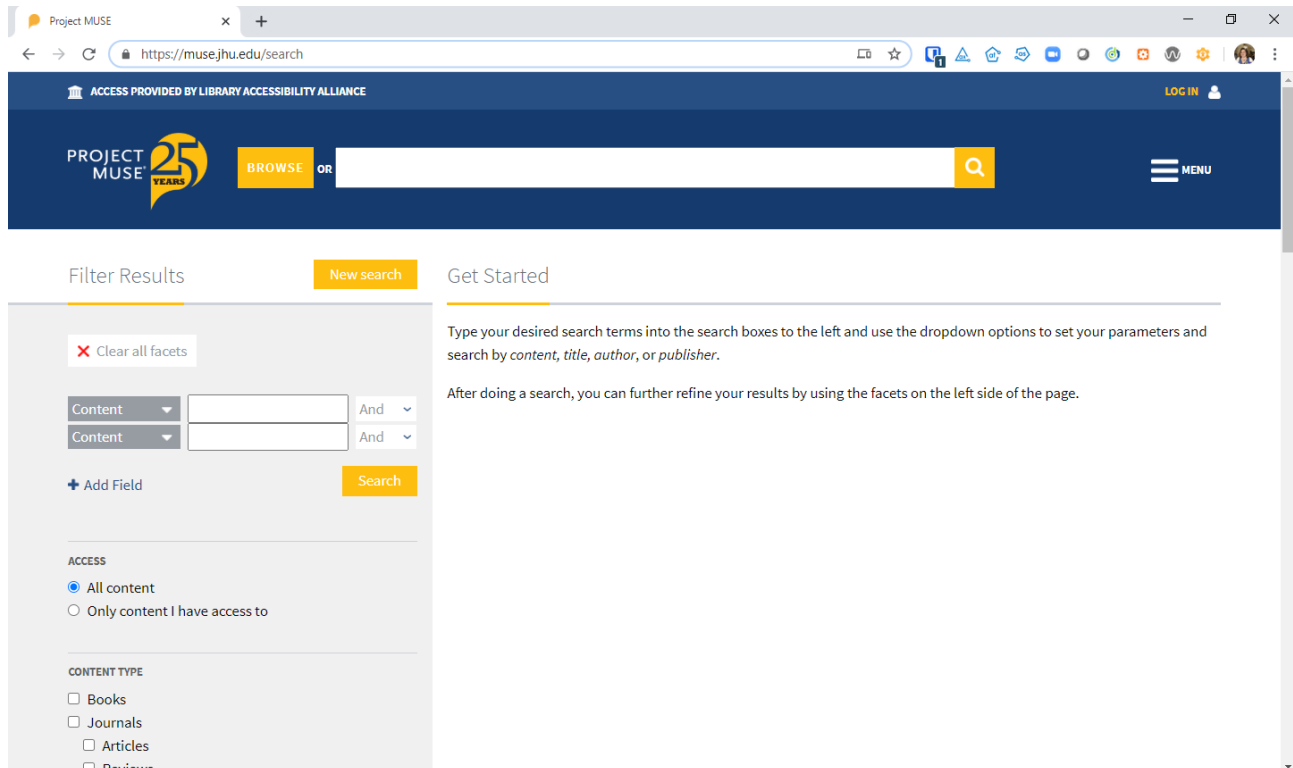**Additional manual findings using NVDA screen reader**
1. **SC 4.1.2** – The menu that expands or collapses does not share it programmatically with the screen reader
2. **SC 2.4.7** – Next and previous buttons do not have a visible keyboard focus

5. Advanced Search

Source: https://muse.jhu.edu/search

Test case: Test advanced search (linked from browse page under the menu drop-down menu)

Automated findings using Axe

1. **SC 1.3.1** - and <ol> must only directly contain <li>, <script> or <template> elements
2. **SC 1.4.3** - Elements must have sufficient color contrast, grey and white text combinations give the contrast ratio of 2.76:1

Additional manual findings using NVDA screen reader

1. **SC 4.1.2** – The menu that expands or collapses does not share it programmatically with the screen reader
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