High–level accessibility review – LAA
(Project MUSE platform)

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Summary

Top 3 problems for the Project MUSE platform

This high-level assessment covers limited portions and functionality of the Project MUSE platform. The assessment revealed issues with assistive technology compatibility, resulting in some users missing information required to understand content, states and operate functions. It is important to keep in mind that the findings represent a high-level assessment, and do not reflect the results of a Deque Comprehensive Web Assessment.

1. **Info and Relationships –** A variety of content is setup as lists but should not be. There are also numerous occurrences of content that appears to be headings or tables but are not marked up as such.
2. **On Input –** The search results screen can't be filtered without reloading the entire page.
3. **Focus Order –** The search results screen would be very difficult for keyboard and screen reader users as your focus jumps back to the top of the page whenever a filter is changed, and the user must navigate through the content again.

Review of Top Accessibility issues from previous evaluation

Majority of the issues from the previous evaluation have been remidiated. Vast majority were color contrast issues. There is only one contrast issue that remains. There are still some fields that do not have a persistent visible label.

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 Chrome, Firefox and Edge. Details here: https://www.deque.com/products/axe/.

No sitewide automated issues were found.

Additional manual findings using NVDA screen reader

1. **SC 1.3.1 A** – Info and Relationships – The footer has what appears to be headings (About, Resources, What's on Muse, Information for, Contact, and Policy & Terms) that are not marked as headings.

1. **Landing Page**

Source: https://proxy.lib.umich.edu/login?user=deque-
contractor&pass=SPzz9T96MHtYSvTv&url=https://ddm.dnd.lib.umich.edu/database/link/9291?utm
_source=library-search
Test case: Test initial interface/landing page to ensure menus, sub-menus, search box, images,
icons, etc. are accessible.
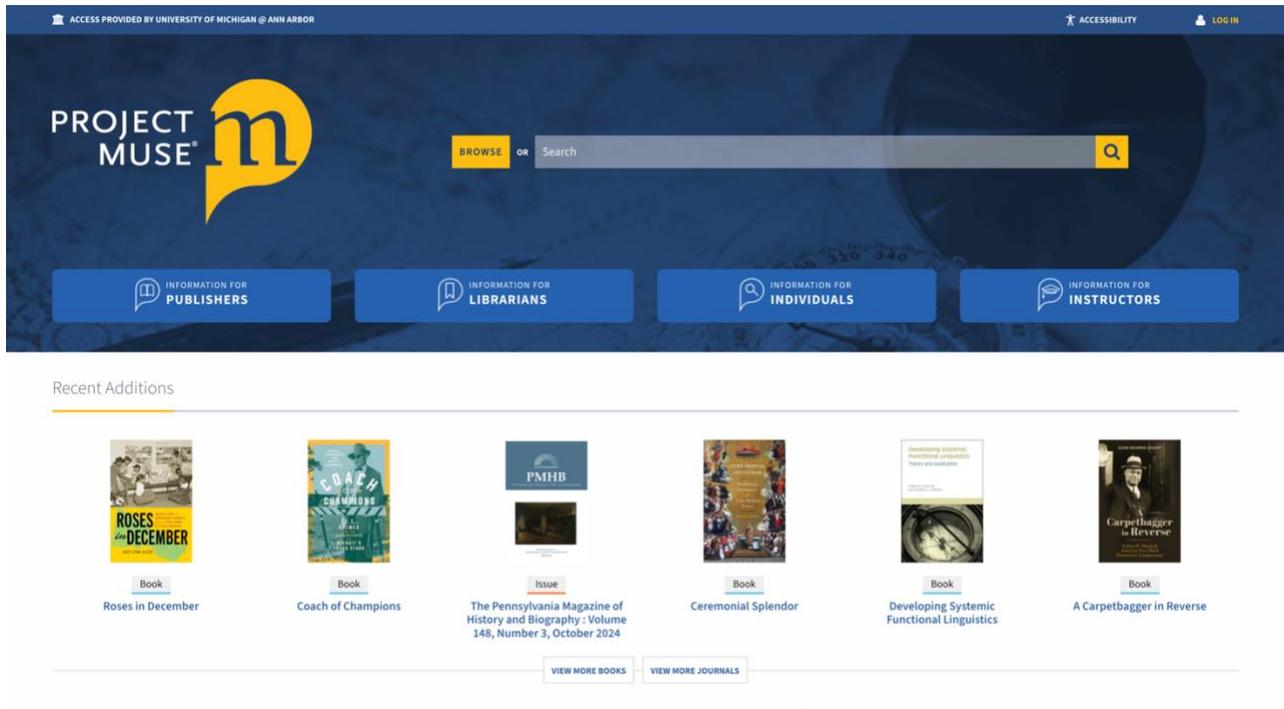
Automated findings using Axe
No issues found that are specific to this page.

Additional manual findings using NVDA screen reader

1. **SC 1.1.1 A** – Non-text Content – The image with text reading "100+ Participating Journals. Sustainable
   Open Access....." does not have matching alternative content.
2. **SC 1.3.1 A** – Info and Relationships – The text below each recent addition (Disciplining Democracy,
   Brilliant Modernism, etc.) is setup as a list but it is not a list. Each one is a single item and should not
   be a list.
3. **SC 1.3.1 A** – Info and Relationships – The text above each MUSE News Item appears to be a heading
   but is not marked up as such.
4. **SC 1.4.3 AA** – Contrast (Minimum) – The white (#ffffff) text in the search field does not have at least
   4.5:1 contrast with the semi-transparent gray (#7B8AA1) background.

2. Search Results – Minecraft education

Source: https://muse-jhu-edu.proxy.lib.umich.edu/search?action=search&query=content:minecraft%20education:and&min=1&max=10&t=header

Test case: From the initial landing page, conduct a search for: minecraft education. Test search results page, including filters/refine search (ex: content type = journals > articles) and sort by options.

Automated findings using Axe
No issues found that are specific to this page.

Additional manual findings using NVDA screen reader
1. **SC 1.3.1 A** – Info and Relationships – Each search result appears to have a heading, but the content is not set as a heading.
2. **SC 2.4.3 A** – Focus Order – When filters are applied, edited or removed focus is lost and moves to the top of the page. Focus should remain on the selected filter input.
3. **SC 2.4.4 A** – Link Purpose (In Context) – View, Download, and Save links are repeated on each search result but they all have the same accessible name. They do not contain information about which specific article they are for.
4. **SC 3.2.2 A** – On Input – When filters are added, changed or removed the entire page reloads. There should not be change in context when inputs (checkboxes, radio buttons, etc.) are selected. The content in the right column can reload but the entire page should not.
5. **SC 3.3.2 A** – Labels or Instructions - Labels are not persistent for form controls as rely on placeholder text or visual location.
6. **SC 4.1.2 A** – Name, Role, Value – Some of the search results have an option called "Show Chapters" which functions like a button and allows content to be collapsed and expanded. The role should be changed to button and contain the aria-expanded attribute.
7. **SC 4.1.2 A** – Name, Role, Value – Each item within a search result is set as a list item. Visually the items are not a list so they should not be set as such.

3. Search Results Landing Page

Source: https://muse-jhu-edu.proxy.lib.umich.edu/pub/1/article/641831
Test case: Test individual search result landing page (ex: Minecraft and the Building Blocks of Creative Individuality) & test actual document (PDF, etc.).

Automated findings using Axe

No issues found that are specific to this page.

Additional manual findings using NVDA screen reader

1. **SC 1.3.1 A** – Info and Relationships – The Title of the article appears to be a heading but is not marked up as such.
2. **SC 1.3.1 A** – Info and Relationships – The additional information content at the bottom of the page appears to be a table but is not marked up as such.
3. **SC 2.1.1 A** – Keyboard – When citation is opened the close button on the menu cannot be reached with the keyboard alone.
4. **SC 2.4.3 A** – Focus Order – Citation is clicked a menu is expanded. The focus does not move to the menu. The entire page must be traversed with the keyboard to reach the opened menu.
5. **SC 4.1.2 A** – Name, Role, Value – All the source links (Configurations, Volume Number, Publication) are sets as lists but do not visually appear to be a list.

4. Actual Documents

Source: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0059488
Test case: Test individual search result landing page "Exploration of Noncoding Sequences in Metagenomes" & test actual document (PDF, video, etc.).

OPEN ACCESS Freely available online   PLOS | ONE

Exploration of Noncoding Sequences in Metagenomes

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Abstract

Environment-dependent genomic features have been defined for different metagenomes, whose genes and their associated processes are related to specific environments. Identification of ORFs and their functional categories are the most common methods for association between functional and environmental features. However, this analysis based on finding ORFs misses noncoding sequences and, therefore, some metagenome regulatory or structural information could be discarded. In this work we analyzed 23 whole metagenomes, including coding and noncoding sequences using the following sequence patterns: (G+C) content, Codon Usage (Cd), Trinucleotide Usage (Tn), and functional assignments for ORF prediction. Herein, we present evidence of a high proportion of noncoding sequences discarded in common similarity-based methods in metagenomics, and the kind of relevant information present in those. We found a high density of trinucleotide repeat sequences (TRS) in noncoding sequences, with a regulatory and adaptive function for metagenome communities. We present associations between trinucleotide values and gene function, where metagenome clustering correlate with microorganism adaptations and kinds of metagenomes. We propose here that noncoding sequences have relevant information to describe metagenomes that could be considered in a whole metagenome analysis in order to improve their organization, classification protocols, and their relation with the environment.

Automated findings using Axe
Not assessed due to insufficient time.

Additional manual findings using NVDA screen reader

Not assessed due to insufficient time.

5. Accessibility Settings

Source: https://muse-jhu-edu.proxy.lib.umich.edu/account/user_settings.

Test case: Test accessibility settings.

Automated findings using Axe
No issues found that are specific to this page.

Additional manual findings using NVDA screen reader
No issues found that are specific to this page.