

To: Robert Van Rennes, Big Ten Academic Alliance
From: Grey L. Pierce, MSU Usability/Accessibility Research and Consulting
Subject: IGI Global High-Level Accessibility Evaluation for the Library Accessibility Alliance
Date: July 27, 2020

MSU Usability/Accessibility Research and Consulting (MSU UARC) conducted a high-level accessibility evaluation of the IGI Global platform to evaluate its conformance with WCAG 2.1 AA Criteria. This evaluation did not include all functionality or content of the site or all WCAG 2.1 AA Success Criteria.

During this evaluation, a number of issues were found that will make the site impossible to use for many individuals with disabilities and will make some site content difficult to use for many others.

Critically, no means to pause, stop, or hide the rotator on the Home page is provided, and rotator content is read out by screen readers whenever it changes, regardless of the current reading or focus location. Rotators that cannot be stopped create significant issues for individuals with cognitive and visual impairments, as well as for screen reader users, and content being unexpectedly read out creates further problems for screen reader users.

Keyboard users, including screen reader users and users with dexterity impairments, will find it impossible to access or use some site content. A variety of content throughout the site cannot be reached or operated via keyboard, making it impossible to use for those that rely on keyboard access. Focus order is incorrect in some places, increasing the difficulty of using the site with a keyboard, and many interactive elements lack a sufficiently visible focus indicator, making it difficult for many keyboard-only users to effectively use them, as they cannot determine when they have reached the correct element.

Individuals with visual impairments, including those that rely on screen readers, will also have problems using the site. Some content is not read out correctly and structural information (e.g., headings, lists) is not appropriately conveyed to users, making it difficult or impossible to understand content and organization in places. Some form inputs are not appropriately labeled, making those inputs difficult or impossible to use for those that rely on screen readers. Custom elements do not correctly announce themselves to screen readers, making them difficult to understand and use. Many images have inappropriate alternative text, significantly impacting users with visual impairments.

The PDF has not been tagged for accessibility and no structural information is provided to assistive technologies, making it extremely difficult to use and navigate for users with disabilities. Additionally, no title or language is provided to assistive technologies.

Other issues were found that will make it difficult for users with a variety of disabilities to effectively use the system, including insufficient color contrast for text and meaningful visual elements, insufficient link context, and images of text being used instead of styled text.

To improve access for users with disabilities, MSU UARC recommends a full WCAG 2.1 AA evaluation and that the problems discovered be remediated.

Note: Results for "food security " were used as an example of a Search Results page "Agricultural Development and Food Security in Developing Nations" was used as an example of a Book page, and "International Journal of Cyber Warfare and Terrorism" was used as an example of a Journal page.

For reference, screenshots of the Home page (wide, medium, and narrow viewport widths) at the time this evaluation was completed has been included at the end of this memo.

High-Level Findings

Conformance

- On the Home page, no means is provided to pause, stop, or hide rotating content. [[WCAG 2.1 CR 5](#), [WCAG 2.1 SC 2.2.2](#)]
- On the Home page, the rotator is automatically read out by screen readers when it changes, regardless of where focus is or what the user is doing. [[WCAG 2.1 CR 5](#)]

Document Structure

- Headings are not appropriately structured throughout the site. [[WCAG 2.1 SC 1.3.1](#)]
 - Headings in navigation dropdowns should be tagged as headings (e.g., "Database Search" and "Saved Searches" in "Database Search" expander)
 - Headings in footer (e.g., "Research Tools", "User Resources", etc.) should be tagged as headings (h2s)
 - On the Home page, "Reference Books", "Research Journals", and "Video Lectures" should be tagged as headings
 - On the Search Results page, "Saved Searches" and "Refine Results" should be tagged as headings (h2s)
 - On the Search Results page, subheadings under "Refine Results" (e.g., "Content Accessibility") should be tagged as headings (h3s)
 - On the Search Results page, result titles should be tagged as headings
 - On the Book page, "Front Materials", "Chapters", and "Back Materials" should be headings (h3s)
- Headings in navigation dropdowns should not be at the same list level as the items they organize (e.g., "Database Search" and "Basic Search", "Advanced Search", and "Expert Search" in the "Database Search" expander). [[WCAG 2.1 SC 1.3.1](#)]
- On the Search Results page, checkbox lists in the "Refine Results" section are not coded as programmatic lists. [[WCAG 2.1 SC 1.3.1](#)]
- On the Search Results page, search results are not coded into a programmatic list. [[WCAG 2.1 SC 1.3.1](#)]
- On the Book page, "Copyright", "Pages", "ISBN13", etc. are not coded into a programmatic list. [[WCAG 2.1 SC 1.3.1](#)]
- On the Book page, lists under "Front Materials" (e.g., "Title Page", "Copyright Page", etc.), "Chapters", and "Back Materials" are not coded as programmatic lists. [[WCAG 2.1 SC 1.3.1](#)]
- On the Journal page, "Published", "Established", "Volumes", "ISSN", etc. are not coded into a programmatic list. [[WCAG 2.1 SC 1.3.1](#)]
- On the Journal page, the list under "Issues" is not coded into a programmatic list. [[WCAG 2.1 SC 1.3.1](#)]

- On the Search Results page, result titles should be read before "View HTML", "View PDF", and "Full-Text". [[WCAG 2.1 SC 1.3.2](#)]
- PDF is untagged, and provides no structural information to assistive technologies. [[WCAG 2.1 SC 1.3.1](#)]
- The language of the PDF is not defined. [[WCAG 2.1 SC 3.1.1](#)]

Keyboard Support

- A variety of interactive content cannot be reached via keyboard. [[WCAG 2.1 SC 2.1.1](#)]
 - Institution login status tooltip in page header
 - Language tooltip in page header
 - Language selector dropdown in page header
 - "Recent Search Results" on the Search Results, Book, and Journal pages
 - "Show Contents" expanders on the Search Results page
 - "Saved Searches" and "Refine Results" expanders on the Search Results page [narrow viewport]
 - "Indices", "Cite Book" and "Favorite" buttons, and "Reset" link on the Book page
 - Buttons to expand/collapse "Front Materials", "Chapters", and "Back Materials" sections on the Book page
 - "Indices", "Reference Hub", "Cite Journal" and "Favorite" buttons, and "Reset" link on the Journal page
- On the Search Results page, keyboard users are forced to move focus through all items in the "Saved Searches" and "Refine Results" sidebar to reach search results (instead of being able to collapse and skip the sidebar). This results in users needing to make nearly 200 key presses to get to content. [[WCAG 2.1 SC 2.1.1](#), [WCAG 2.1 SC 2.4.3](#)]
- Focus does not immediately go into the main menu when it is opened [narrow viewport]. [[WCAG 2.1 SC 2.4.3](#)]
- On the Search Results page, focus inappropriately resets to the top of the page when switching tabs ("Basic", "Advanced", "Expert"), sorting results, or refining results. [[WCAG 2.1 SC 2.4.3](#)]
- On the Search Results page, result titles should be reached before the associated "View HTML" and "View PDF" links. [[WCAG 2.1 SC 2.4.3](#)]
- On the Book and Journal pages, the search button is incorrectly reached before the search text input. [[WCAG 2.1 SC 2.4.3](#)]
- Focus is not sufficiently visible for a variety of interactive content. [[WCAG 2.1 SC 2.4.7](#)]
 - "Language"
 - "Michigan State University" dropdown
 - Navigation items ("Database Search", "Research Tools", "User Resources")
 - Image links in footer (social media links, WFCF link, COPE link)
 - Rotator navigation dots and left/right navigation arrows in carousels on the Home page
 - "For Librarians", "For Researchers", and "For Authors" buttons on the Home page
 - Search autocomplete dropdown items on the Home page

- Tabs ("Basic", "Advanced", "Expert") on the Search Results page
- "Save Search" and "Sort by" dropdowns on the Search Results page
- "View HTML" and "View PDF" buttons on the Search Results page
- Next page button on the Search Results page
- "Copyright" dropdowns in the Advanced tab on the Search Results page
- Checkboxes and dropdowns in the Expert tab on the Search Results page
- "Full-Book Download", "Supplementary Materials", "PDF", and "HTML" buttons on the Book page
- Search button on the Book and Journal pages

Navigation

- The PDF is not titled. [[WCAG 2.1 SC 2.4.2](#)]
- On the Book page, "PDF" and "HTML" buttons are not programmatically or logically associated with identifying content, making it unclear to screen reader users what content they open. [[WCAG 2.1 SC 2.4.4](#), [WCAG 2.1 SC 1.1.1](#)]

Forms and Data Submission

- On the Search Results page, the "Retain filters on search" checkbox is not programmatically labeled. [[WCAG 2.1 SC 3.3.2](#)]
- On the Search Results page, checkboxes in the "Refine Results" section are not programmatically associated with the appropriate grouping labels (e.g., "Books" and "Content Types"). [[WCAG 2.1 SC 3.3.2](#)]
- On the Search Results page, the "Sort by" dropdown is not programmatically labeled. [[WCAG 2.1 SC 3.3.2](#)]
- On the Search Results page, the "Page" input is not programmatically labeled. [[WCAG 2.1 SC 3.3.2](#)]

Images

- On the Home page, rotator navigation dots and the search button do not have appropriate alternative text. [[WCAG 2.1 SC 1.1.1](#)]
- On the Search Results page, the next page button does not have appropriate alternative text. [[WCAG 2.1 SC 1.1.1](#)]
- In the footer, "title" and "alt" attributes should not both be assigned for images (e.g., "WCFC" graphic), and alternative text should contain all text present in images. [[WCAG 2.1 SC 1.1.1](#)]
- A variety of images inappropriately have alternative text that is identical or nearly identical to the text that immediately follows or precedes them (they should have null alt attributes). [[WCAG 2.1 SC 1.1.1](#)]
 - MSU seal in the Michigan State University expander in the page header
 - Items in carousels (e.g., "Business and Management") on the Home page
 - Icons next to "For Librarians", "For Researchers", and "For Authors" on the Home page
 - Book covers at the top of the page and in the Related Books sections on the Book page
 - Book covers at the top of the page and in the Related Journals sections on the Journal page

- "IGI Global is a FULL Member of the International Committee on Publication Ethics" is an image of text, instead of styled text. [[WCAG 2.1 SC 1.4.5](#)]

Color and Visual Characteristics

- White text on light orange background (e.g., "Reference Books" on Home page), white text on salmon (e.g., "For Researchers" on Home page), white text on mustard (e.g., "For Authors" on Home page), light grey text on white (e.g., "Enter full-text terms, title, author, ISBN, or DOI" on Home page; "Book Chapter" on Search Results page; "Full text search term(s)" on Book and Journal pages), green text on white (e.g., author names, copyright year, and length ["Frances Bekele, Isaac Bekele. © 2017. 36 pages."] on Search Results page), grey text on light grey (e.g., "Refine Results" filters without matches; "Videos", etc. on Search Results page), white text on grey (e.g., "PDF" and "HTML" in "Show Contents" expander on Search Results page; "PDF" and "HTML" on Book page), green text on white and light grey (e.g., author names ["Theresa Ann Rajack-Talley (University of Louisville, USA)"] on Search Results page), black text on dark grey (e.g., "View All Books" button when focused on Book page; "View All Journals" button when focused on Journal page), and grey text on white (e.g., "Copyright:", "Pages:", "ISBN13:", etc. on Book page; "Published:", "Established:", "Volumes:", etc. on Journal page; header stamp ["Michigan State University", "Downloaded..." in PDF] have insufficient contrast. [[WCAG 2.1 SC 1.4.3](#)]
- On the Search Results page, white on light grey checkmarks (e.g., "Refine Results" filters when hovered) have insufficient contrast. [[WCAG 2.1 SC 1.4.11](#)]

Custom Elements and Dynamic Content

- On the Home page, no means is provided to pause, stop, or hide rotating content. [[WCAG 2.1 SC 2.2.2](#) ,[WCAG 2.1 CR 5](#)]
- Name, role, and value (i.e., "menu", that is a menu that expands, and whether it is open) are not provided for the main menu/hamburger icon [narrow viewport]. [[WCAG 2.1 SC 4.1.2](#)]
- On the Home and Search Results pages, screen readers are not notified that the search input has an autocomplete function or when it appears. [[WCAG 2.1 SC 4.1.2](#)]
- On the Search Results page, roles and values (i.e., that they are checkboxes and whether they are selected) are not provided for checkboxes in the "Refine Results" section (with the exception of the "Retain filters on search" checkbox). [[WCAG 2.1 SC 4.1.2](#)]
- On the Search Results page, roles and values (i.e., that they are tabs and whether they are selected) are not provided for tabs ("Basic", "Advanced", "Expert"). [[WCAG 2.1 SC 4.1.2](#)]

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. UARC 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.

Home Page Screenshots

Large Viewport

IGI Global
PUBLISHER OF TIMELY KNOWLEDGE

Database Search - Research Tools - User Resources - Michigan State University

Log In Register Language: English

IGI Global is Celebrating 30+ Years as an International Academic Publisher
Publishing Award-Winning Content for Over 30 Years

Enter full-text terms, title, author, ISBN, or DOI

Browse All | Advanced Search

Reference Books
Your institution has full-text access to 67 of over 5,400 reference books
Browse Now

Research Journals
Your institution has full-text access to 1 of over 230 research journals
Browse Now

Video Lectures
Your institution has full-viewing access to 0 of over 80 video lectures
Browse Now

Newly Released Books and Journals View All New Releases | View Complete Listing

Early Warning Systems and Targeted Inter...
© 2020, 374 pages

International Journal of Cyber Warfare a...
© 2020, Vol 10, Iss 3

International Journal of Cyber Warfare a...
© 2020, Vol 10, Iss 2

Smart Technology Applications in the Tourism Industry
© 2020, 569 pages

International Journal of Cyber Warfare a...
© 2020, Vol 10, Iss 1

Handbook of Research on Combating Threat...
© 2020, 406 pages

Browse by Subject View Complete Listing

Business and Management

Library and Information Science

Education

Government and Law

Computer Science and Information Technology

Medical, Healthcare, and Life Sciences

For Librarians
View Now

For Researchers
View Now

For Authors
View Now

Research Tools
Database Search | Help | User Guide | Advisory Board

User Resources
Librarians | Researchers | Authors

Librarian Tools
COUNTER Reports | Persistent URLs | MARC Records | Institution Holdings | Institution Settings


Librarian Resources
Training | Title Lists | Licensing and Consortium Information | Promotions | Online Symposium Series

Policies
Privacy Policy | Cookie & Tracking Notice | Terms and Conditions

IGI Global is a U.S.A. Member of the International Committee on Publication Ethics

Copyright © 1988-2020, IGI Global - All Rights Reserved

Medium Viewport

Login Register Language: English
Michigan State University
[Database Search](#) | [Research Tools](#) | [User Resources](#)

IGI Global is Celebrating 30+ Years as an International Academic Publisher


Publishing Award-Winning Content for Over 30 Years


[Browse All](#) | [Advanced Search](#)


- Reference Books**
Your institution has full-text access to 87 of over 5,400 reference books.
[Browse Now](#)
- Research Journals**
Your institution has full-text access to 1 of over 230 research Journals.
[Browse Now](#)
- Video Lectures**
Your institution has full-viewing access to 0 of over 80 video lectures.
[Browse Now](#)


Newly Released Books and Journals

[View All New Releases](#) | [View Complete Listing](#)

- 

Early Warning Systems and Targeted Inter...
© 2020. 374 pages
- 


International Journal of Cyber Warfare a...
© 2020. Vol 10, Iss 3
- 


International Journal of Cyber Warfare a...
© 2020. Vol 10, Iss 2
- 


Handbook of Research on Smart Technology...
© 2020. 569 pages


Browse by Subject

[View Complete Listing](#)

- 

Business and Management
- 

Library and Information Science
- 

Education
- 

Government and Law

- For Librarians**
[View Now](#)
- For Researchers**
[View Now](#)
- For Authors**
[View Now](#)

Research Tools
[Database Search](#) | [Help](#) | [User Guide](#) | [Advisory Board](#)

User Resources
[Librarians](#) | [Researchers](#) | [Authors](#)

Librarian Tools
[COUNTER Reports](#) | [Persistent URLs](#) | [MARC Records](#) | [Institution Holdings](#) | [Institution Settings](#)

Librarian Resources
[Training](#) | [Title Lists](#) | [Licensing and Consortium Information](#) | [Promotions](#) | [Online Symposium Series](#)

Policies
[Privacy Policy](#) | [Cookie & Tracking Notice](#) | [Terms and Conditions](#)

Proud Supporter of WFCP
[Learn More](#)

COPE
IGI Global is a FULL Member of the International Committee on Publication Ethics

Copyright © 1988-2020, IGI Global - All Rights Reserved

Narrow Viewport



IGI Global is Celebrating 30+ Years as an International Academic Publisher
Publishing Award-Winning Content for Over 30 Years

Enter full-text terms, title, author, ISBN, or DOI
Browse All | Advanced Search

Reference Books
Your institution has full-text access to 67 of over 5,400 reference books.
Browse Now ▶

Research Journals
Your institution has full-text access to 1 of over 230 research journals.
Browse Now ▶

Video Lectures
Your institution has full-viewing access to 0 of over 80 video lectures.
Browse Now ▶

Newly Released Books and Journals [View All New Releases](#) | [View Complete Listing](#)



Early Warning Systems and Targeted Inter...
© 2020, 374 pages



International Journal of Cyber Warfare a...
© 2020, Vol 10, Iss 3

Browse by Subject [View Complete Listing](#)



Business and Management



Library and Information Science

For Librarians
[View Now ▶](#)

For Researchers
[View Now ▶](#)

For Authors
[View Now ▶](#)


Research Tools
[Database Search](#) | [Help](#) | [User Guide](#) | [Advisory Board](#)

User Resources
[Librarians](#) | [Researchers](#) | [Authors](#)


Librarian Tools
[COUNTER Reports](#) | [Persistent URLs](#) | [MARC Records](#) | [Institution Holdings](#) | [Institution Settings](#)

Librarian Resources
[Training](#) | [Title Lists](#) | [Licensing and Consortium Information](#) | [Promotions](#) | [Online Symposium Series](#)

Policies
[Privacy Policy](#) | [Cookie & Tracking Notice](#) | [Terms and Conditions](#)



Proud Supporter of WFCF
[Learn More](#)



IGI Global is a FULL Member of the International Committee on Publication Ethics

Copyright © 1988-2020, IGI Global - All Rights Reserved