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From: Grey L. Pierce, MSU Usability/Accessibility Research and Consulting  
Subject: HeinOnline High-Level Accessibility Evaluation for the Library Accessibility Alliance  
Date: May 6, 2021

MSU Usability/Accessibility Research and Consulting (MSU UARC) conducted a high-level accessibility evaluation of the HeinOnline 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 difficult to use for many others.

Keyboard users, including screen reader users and users with dexterity impairments, will find it difficult or impossible to access or use some content. Some content cannot be reached or operated via keyboard, making it impossible to use for those that rely on keyboard access. Some 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. Keyboard focus order is incorrect in some places, increasing the difficulty of using the site with a keyboard.

Individuals who rely on screen readers, including many users with visual, reading, and language impairments, will have problems using the site. Some content is not read out correctly and structural information (including headings and 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. Some custom elements do not correctly announce themselves to screen readers, making them difficult to understand and use. Some 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 and images in the PDF lack alternative text.

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, use of color alone to distinguish content, images of text being used instead of styled text, content and functionality being removed when the viewport or text size is changed, and inappropriate page titles.

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 "Americans with Disabilities Act" were used as an example of a Search Results page and "Americans with Disabilities Act Scavenger Hunt" was used as an example of an Article page and PDF.*

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

## High-Level Findings

### Document Structure

- Headings are not appropriately structured. [[WCAG 2.1 SC 1.3.1](#)]
  - In the Select Databases to Search lightbox, "SELECT DATABASES TO SEARCH" should be tagged as an h1 and subheadings (e.g., "Journals and Periodicals") should be tagged as headings
  - In the Search Syntax lightbox, the close button should not be tagged as a heading
  - In the Search Syntax lightbox, "Search Syntax" should be tagged as an h1
  - The Home, Search Results, and Advanced Search pages lack an h1 to organize subsequent headings
  - On the Home page, contents of the "Browse Databases by Category" section are tagged as headings when they do not organize any content (i.e., when they are not expanded)
  - On the Home page, visual headings in expanded content in the "Browse Databases by Name" section are not tagged as headings
- Logo and "All Databases" at start of pages are inappropriately coded into one-item lists. [[WCAG 2.1 SC 1.3.1](#)]
- On the Home page, tables are inappropriately used to structure non-tabular content (Databases lists). [[WCAG 2.1 SC 1.3.1](#)]
- On the Search Results page, there are no non-visual indicators of page excerpt subsections in expanded "All Matching Text Pages" sections (i.e., screen reader users are not provided with a means to determine where each excerpt subsection begins and ends). [[WCAG 2.1 SC 1.3.1](#)]
- PDF is untagged, and provides no structural information or reading order information to assistive technologies. [[WCAG 2.1 SC 1.3.1](#), [WCAG 2.1 SC 1.3.2](#)]
- Invisible "js canvas no-touch fontface no-mobile no-phone no-tablet mobilegradea" is inappropriately read out by screen readers at the start of pages. [[WCAG 2.1 SC 1.3.1](#), [WCAG 2.1 SC 1.3.2](#)]
- Content on pages behind lightboxes is incorrectly read out when they are open. [[WCAG 2.1 SC 1.3.2](#)]
- The language of the PDF is not defined. [[WCAG 2.1 SC 3.1.1](#)]

### Keyboard Support

- "Search Help" cannot be reached via keyboard. [[WCAG 2.1 SC 2.1.1](#)]
- In the Select Databases to Search lightbox, "Select All", "Reset", "Submit", and close buttons cannot be reached via keyboard. [[WCAG 2.1 SC 2.1.1](#)]
- Focus goes to an invisible element between "HeinOnline" and the search text input, and interferes with the screen reader reading the input label. [[WCAG 2.1 SC 2.4.3](#), [WCAG 2.1 SC 2.4.6](#)]
- Focus incorrectly goes to the page behind lightboxes when they are open. [[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](#)]

- All content in page header bar (logo, "MyHein Profile", "What's New", etc.), "HeinOnline" graphic link, and search button
- On the Home page, "i" icons and headings in expanded sections (e.g., "American Enterprise Institute (AEI)")
- On the Search Results page, checkboxes, dropdowns, and "Show More"/"Show Less" links
- On the Search Results page, Download PDF, Download Options, Email, and MyHein buttons
- On the Article page, dropdowns, previous and next page buttons, and More Options button
- On the Advanced Search page, dropdowns, "Search" buttons, checkboxes, and "fastcase" image link

## Navigation

- On the Search Results, Article, and Advanced Search pages, page title does not identify the unique page. [[WCAG 2.1 SC 2.4.2](#)]
- PDF is not titled. [[WCAG 2.1 SC 2.4.2](#)]

## Forms and Data Submission

- Focus goes to an invisible element between "HeinOnline" and the search text input, and interferes with the screen reader reading the input label. [[WCAG 2.1 SC 2.4.3](#), [WCAG 2.1 SC 2.4.6](#)]
- On the Search Results page, text inputs in the "Date" subsection of the "Refine Your Search" section are not programmatically labeled. [[WCAG 2.1 SC 2.4.6](#)]
- On the Advanced Search page, all search text inputs and dropdowns lack programmatic labels. [[WCAG 2.1 SC 2.4.6](#)]
- On the Advanced Search page, the "Page" input lacks a programmatic label. [[WCAG 2.1 SC 2.4.6](#)]

## Images

- A variety of images do not have appropriate alternative text. [[WCAG 2.1 SC 1.1.1](#)]
  - Search button
  - "21 YEARS OF HEINONLINE" image
  - On the Search Results page, the Download PDF, Download Options, Email, and MyHein buttons
  - On the Article page, the document pages (i.e., the article itself)
  - On the Article page, ">" symbols in the breadcrumbs bar
  - On the Advanced Search page, the fastcase image
- On the Article page, "Print/Download Options" is inappropriately read out on "Email PDF Link" button. [[WCAG 2.1 SC 1.1.1](#)]
- On the Article page, names of buttons above the online reader (e.g., Download PDF of This Section, Print/Download Options) are inappropriately read out twice. [[WCAG 2.1 SC 1.1.1](#)]
- Images in the PDF lack alternative text. [[WCAG 2.1 SC 1.1.1](#)]
- On the Article page, the document pages are images of text, instead of styled text. [[WCAG 2.1 SC 1.4.5](#)]

## Color and Visual Characteristics

- On the Article page, color is the only means to differentiate the selected section in the Contents sidebar. [[WCAG 2.1 SC 1.4.1](#)]
- Light brown text on white background (e.g., "Search for a term, title, author, or citation ..."), white text on light brown (e.g., "All Databases" on Home page), white text on green (e.g., "Live Chat"), white text on red (e.g., "Email Us"), and grey text on white (e.g., "Enter a document or case citation" on the Advanced Search page) have insufficient contrast. [[WCAG 2.1 SC 1.4.3](#)]
- On the Home page, white "+" symbols on green background and white "i" symbols on grey have insufficient contrast. [[WCAG 2.1 SC 1.4.11](#)]

## Custom Elements and Dynamic Content

- Search button is not visible at some page widths and text sizes. [[WCAG 2.1 SC 1.4.4](#)]
- On the Home page, the start of the content area is not visible at some page widths and text sizes. [[WCAG 2.1 SC 1.4.4](#)]
- On the Article page, document content disappears at some page widths and text sizes. [[WCAG 2.1 SC 1.4.4](#)]
- The values of the search autocomplete dropdown are incorrectly read out as the text entered into the search input, instead of the visible values (e.g., "Americans with Disabilities Act" instead of "Author: Americans with Disabilities Act"). [[WCAG 2.1 SC 4.1.2](#)]
- Roles and values (i.e., that they expand and whether they are expanded) are not provided for "MyHein Profile", "What's New", "Help", "Connect", or "Account" until after they've been expanded for the first time. [[WCAG 2.1 SC 4.1.2](#)]
- Screen reader users are not notified when lightboxes are opened. [[WCAG 2.1 SC 4.1.2](#)]
- On the Home page, roles and values (i.e., that they expand and whether they are expanded) are not provided for expanders in the "Browse Databases by Category" or "Browse Databases by Name" sections, and screen reader users are not notified when they change. [[WCAG 2.1 SC 4.1.2](#)]
- On the Search Results page, roles and values (i.e., that they expand and whether they are expanded) are not provided for expanders in the "Refine Your Search" section or for the "All Matching Text Pages" expanders after they have been expanded the first time, and screen reader users are not notified when they change. [[WCAG 2.1 SC 4.1.2](#)]
- On the Search Results page, no feedback is provided to screen readers when "Show More"/"Show Less" links in the "Refine Your Search" section or "Toggle All Matching Text Pages" links are activated. [[WCAG 2.1 SC 4.1.2](#)]
- On the Advanced Search page, roles and values (i.e., that they expand and whether they are expanded) are not provided for "Add field" link, and screen reader users are not notified when it is activated. [[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

## Wide Viewport

The screenshot displays the HeinOnline website interface. At the top left is the logo for "21 YEARS OF HEINONLINE". A navigation bar contains "All Databases", "MyHein Profile", "What's New", "Help", "Connect", and "Account". A search bar is positioned below the navigation bar with the placeholder text "Search for a term, title, author, or citation ...". To the right of the search bar is a dropdown menu for "All Databases" and a search icon. A "Live Chat" button is located on the right side of the page.

The main content area is divided into two sections:

- Browse Databases by Category**
  - Canadian Content
  - Case Law
  - Current Content Journals
  - International Resources
  - International Treaties and Agreements
  - Journals and Periodicals
  - Special Collections
  - U.K. Content
  - U.S. Federal Content
  - U.S. State Content
- Browse Databases by Name**
  - Law Journal Library
  - American Bar Association Journals
  - Core U.S. Journals
  - Criminal Justice Journals
  - International & Non-U.S. Law Journals
  - Most Cited Law Journals
  - ABA Law Library Collection Periodicals
  - Acts of the Parliament of Canada (Annual Statutes)
  - American Association of Law Libraries (AALL)
  - American Enterprise Institute (AEI)
  - American Indian Law Collection
  - American Law Institute Library
  - Animal Studies: Law, Welfare and Rights
  - Association of American Law Schools (AALS)
  - Bar Journals
  - Brennan Center for Justice Publications at NYU School of Law
  - Canada Supreme Court Reports
  - Civil Rights and Social Justice
  - Code of Federal Regulations
  - Congress and the Courts
  - COVID-19: Pandemics Past and Present
  - Criminal Justice & Criminology
  - Current Index to Legal Periodicals (CILP)
  - Early American Case Law
  - English Reports
  - European Centre for Minority Issues
  - Executive Privilege
  - Federal Register Library
  - Foreign & International Law Resources Database
  - Foreign Relations of the United States (FRUS)
  - GAO Reports and Comptroller General Decisions
  - Gun Regulation and Legislation in America
  - Hague Academy Collected Courses Online / Recueil des cours en ligne
  - Harvard Research in International Law
  - History of Bankruptcy: Taxation & Economic Reform in America Part III
  - History of International Law
  - History of Supreme Court Nominations
  - Immigration and Nationality Law Review
  - Index to Foreign Legal Periodicals (IFLP)
  - Intellectual Property Law Collection
  - International Commission of Jurists Library (ICJ)
  - International Journal of the Jurisprudence of Family Library
  - International Law Association Reports
  - John F. Kennedy Assassination Collection
  - Kluwer Law International Journal Library
  - Legal Classics
  - Manual of Patent Examining Procedure
  - Martindale-Hubbell Law Directory
  - National Conference of Commissioners on Uniform State Laws
  - National Moot Court Competition
  - NOMOS: American Society for Political and Legal Philosophy
  - Pentagon Papers
  - Philip C. Jessup Library
  - Prestathood Legal Materials
  - Recueil des cours en ligne / Hague Academy Collected Courses Online
  - Reports of U.S. Presidential Commissions and Other Advisory Bodies
  - Review of Banking and Financial Law
  - Revised Statutes of Canada
  - Session Laws Library
  - Slavery in America and the World: History, Culture & Law
  - Standard Federal Tax Reporter (1917-1985)
  - State Attorney General Reports and Opinions
  - State Constitutions Illustrated
  - State Reports: A Historical Archive
  - State Statutes: A Historical Archive
  - Statutes of the Realm
  - Tax Foundation Archive Publications
  - Taxation & Economic Reform in America Parts I & II
  - Trends in Law Library Management and Technology
  - UNC Press Law Publications
  - Uniform Law Commission: National Conference of Commissioners on Uniform State Laws
  - United Nations Law Collection
  - U.S. Code
  - U.S. Congressional Documents
  - U.S. Congressional Serial Set
  - U.S. Federal Agency Documents, Decisions, and Appeals
  - U.S. Federal Legislative History Library
  - U.S. Presidential Impeachment Library
  - U.S. Presidential Library
  - U.S. Statutes at Large
  - U.S. Supreme Court Library
  - U.S. Treaties and Agreements Library
  - Women and the Law (Peggy)
  - World Constitutions Illustrated
  - World Treaty Library
  - World Trials Library

# Medium Viewport

 All Databases ▾  MyHein Profile ▾  What's New ▾  Help ▾  Connect ▾  Account ▾

  All Databases ▾  

Advanced Search | Search Help ▾

## Browse Databases by Category

- Canadian Content
- Case Law
- Current Content Journals
- International Resources
- International Treaties and Agreements
- Journals and Periodicals
- Special Collections
- U.K. Content
- U.S. Federal Content
- U.S. State Content

## Browse Databases by Name

- 1 Law Journal Library
- 1 American Bar Association Journals
- 1 Core U.S. Journals
- 1 Criminal Justice Journals
- 1 International & Non-U.S. Law Journals
- 1 Most-Cited Law Journals
- 1 ABA Law Library Collection Periodicals
- 1 Acts of the Parliament of Canada (Annual Statutes)
- 1 American Association of Law Libraries (AALL)
- + 1 American Enterprise Institute (AEI)
- 1 American Indian Law Collection
- 1 American Law Institute Library
- 1 Animal Studies: Law, Welfare and Rights
- 1 Association of American Law Schools (AALS)
- 1 Bar Journals
- 1 Brennan Center for Justice Publications at NYU School of Law
- 1 Canada Supreme Court Reports
- + 1 Civil Rights and Social Justice
- 1 Code of Federal Regulations
- 1 Congress and the Courts
- + 1 COVID-19: Pandemics Past and Present
- 1 Criminal Justice & Criminology
- + 1 Current Index to Legal Periodicals (CILP)
- 1 Early American Case Law
- 1 English Reports
- 1 European Centre for Minority Issues
- + 1 Executive Privilege
- 1 Federal Register Library
- 1 Foreign & International Law Resources Database
- 1 Foreign Relations of the United States (FRUS)
- 1 GAO Reports and Comptroller General Decisions
- 1 Gun Regulation and Legislation in America
- 1 Hague Academy Collected Courses Online / Recueil des cours en ligne
- 1 Harvard Research in International Law
- 1 History of Bankruptcy: Taxation & Economic Reform in America Part III
- 1 History of International Law
- 1 History of Supreme Court Nominations
- 1 Immigration and Nationality Law Review
- 1 Index to Foreign Legal Periodicals (IFLP)
- 1 Intellectual Property Law Collection
- 1 International Commission of Jurists Library (ICJ)
- 1 International Journal of the Jurisprudence of Family Library
- 1 International Law Association Reports
- 1 John F. Kennedy Assassination Collection
- 1 Kluwer Law International Journal Library
- 1 Legal Classics
- 1 Manual of Patent Examining Procedure
- 1 Martindale-Hubbell Law Directory
- 1 National Conference of Commissioners on Uniform State Laws
- 1 National Moot Court Competition
- + 1 NOMOS: American Society for Political and Legal Philosophy
- 1 Pentagon Papers
- 1 Philip C. Jessup Library
- 1 Prestathood Legal Materials
- 1 Recueil des cours en ligne / Hague Academy Collected Courses Online
- 1 Reports of U.S. Presidential Commissions and Other Advisory Bodies
- 1 Review of Banking and Financial Law
- 1 Revised Statutes of Canada
- 1 Session Laws Library
- 1 Slavery in America and the World: History, Culture & Law
- 1 Standard Federal Tax Reporter (1917-1985)
- 1 State Attorney General Reports and Opinions
- 1 State Constitutions Illustrated
- 1 State Reports: A Historical Archive
- 1 State Statutes: A Historical Archive
- 1 Statutes of the Realm
- 1 Tax Foundation Archive Publications
- 1 Taxation & Economic Reform in America Parts I & II
- 1 Trends in Law Library Management and Technology
- 1 UNC Press Law Publications
- 1 Uniform Law Commission: National Conference of Commissioners on Uniform State Laws
- 1 United Nations Law Collection
- 1 U.S. Code
- 1 U.S. Congressional Documents
- 1 U.S. Congressional Serial Set
- 1 U.S. Federal Agency Documents, Decisions, and Appeals
- 1 U.S. Federal Legislative History Library
- + 1 U.S. Presidential Impeachment Library
- 1 U.S. Presidential Library
- 1 U.S. Statutes at Large
- 1 U.S. Supreme Court Library
- 1 U.S. Treaties and Agreements Library
- 1 Women and the Law (Peggy)
- 1 World Constitutions Illustrated
- 1 World Treaty Library
- 1 World Trials Library

# Narrow Viewport

 HEINONLINE

Search for a term, title, author, or citation ... All Date

Advanced Search | Search Help

- Case Law
  - Current Content Journals
  - International Resources
  - International Treaties and Agreements
  - Journals and Periodicals
  - Special Collections
- U.K. Content  
U.S. Federal Content  
U.S. State Content

- Browse Databases by Name**
- Law Journal Library
  - American Bar Association Journals
  - Core U.S. Journals
  - Criminal Justice Journals
  - International & Non-U.S. Law Journals
  - Most-Cited Law Journals
  - ABA Law Library Collection Periodicals
  - Acts of the Parliament of Canada (Annual Statutes)
  - American Association of Law Libraries (AALL)
  - American Enterprise Institute (AEI)
  - American Indian Law Collection
  - American Law Institute Library
  - Animal Studies: Law, Welfare and Rights
  - Association of American Law Schools (AALS)
  - Bar Journals
  - Brennan Center for Justice Publications at NYU School of Law
  - Canada Supreme Court Reports
  - Civil Rights and Social Justice
  - Code of Federal Regulations
  - Congress and the Courts
  - COVID-19: Pandemics Past and Present
  - Criminal Justice & Criminology
  - Current Index to Legal Periodicals (CILP)
  - Early American Case Law
  - English Reports
  - European Centre for Minority Issues
  - Executive Privilege
  - Federal Register Library
  - Foreign & International Law Resources Database
  - Foreign Relations of the United States (FRUS)
  - GAO Reports and Comptroller General Decisions
  - Gun Regulation and Legislation in America
  - Hague Academy Collected Courses Online / Recueil des cours en ligne
  - Harvard Research in International Law
  - History of Bankruptcy: Taxation & Economic Reform in America Part II
  - History of International Law
  - History of Supreme Court Nominations
  - Immigration and Nationality Law Review
  - Index to Foreign Legal Periodicals (IFLP)
  - Intellectual Property Law Collection
  - International Commission of Jurists Library (I.C.J.)
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- International Journal of the Jurisprudence of Family Law
  - International Law Association Reports
  - John F. Kennedy Assassination Collection
  - Klauer Law International Journal Library
  - Legal Classics
  - Manual of Patent Examining Procedure
  - Martindale-Hubbell Law Directory
  - National Conference of Commissioners on Uniform State Laws
  - National Moot Court Competition
  - NOMOS: American Society for Political and Legal Philosophy
  - Pentagon Papers
  - Philip C. Jessup Library
  - Prestatohood Legal Materials
  - Recueil des cours en ligne / Hague Academy Collected Courses Online
  - Reports of U.S. Presidential Commissions and Other Advisory Bodies
  - Review of Banking and Financial Law
  - Revised Statutes of Canada
  - Session Laws Library
  - Slavery in America and the World: History, Culture & Law
  - Standard Federal Tax Reporter (1917-1985)
  - State Attorney General Reports and Opinions
  - State Constitutions Illustrated
  - State Reports: A Historical Archive
  - State Statutes: A Historical Archive
  - Statutes of the Realm
  - Tax Foundation Archive Publications
  - Taxation & Economic Reform in America Part I & II
  - Trends in Law Library Management and Technology
  - UNC Press Law Publications
  - Uniform Law Commission: National Conference of Commissioners on Uniform State Laws
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  - U.S. Code
  - U.S. Congressional Documents
  - U.S. Congressional Serial Set
  - U.S. Federal Agency Documents, Decisions, and Appeals
  - U.S. Federal Legislative History Library
  - U.S. Presidential Impeachment Library
  - U.S. Presidential Library
  - U.S. Statutes at Large
  - U.S. Supreme Court Library
  - U.S. Treaties and Agreements Library
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