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From: Graham L. Pierce, MSU Usability/Accessibility Research and Consulting
Subject: Taylor & Francis High-Level Accessibility Evaluation
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MSU Usability/Accessibility Research and Consulting (MSU UARC) conducted a high-level accessibility evaluation of Taylor & Francis to evaluate its conformance with WCAG 2.0 AA Criteria. This evaluation did not include all functionality or content of the site or all WCAG 2.0 AA Criteria.

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

Critically, auto-updating visual content cannot be paused, stopped, or hidden. Individuals with cognitive impairments may be significantly distracted by this content, and be unable to effectively use the pages as a result.

Keyboard users, including screen reader users, will have difficulties when attempting to use the site. Most importantly, some content cannot be reached or operated via keyboard. In addition, many interactive elements lack a sufficiently visible focus indicator, making it difficult or impossible for many keyboard-only users to effectively use them, as they cannot determine when they have reached the correct element. Non-interactive and off-screen content also receives focus and focus order is inappropriate in some places. This makes the site difficult to use for users with severe dexterity impairments and users who rely on screen readers (including users with severe visual impairments).

Individuals with visual impairments that rely on screen readers will have additional problems. Custom elements do not correctly announce themselves or provide feedback to screen readers, making them difficult to understand and use. Some form inputs are not appropriately labeled, making them difficult or impossible to use for those that rely on screen readers. Images throughout the site have incorrect or inappropriate alternative text and images of text are used in place of styled text, further impacting users with visual impairments. Some content that is grouped together visually is not labeled or grouped programmatically, making it difficult or impossible for screen reader users to understand the relationships between those pieces of content. Some structural information, including headings and lists on pages and tables in PDFs, is also not appropriately conveyed to screen reader users, making it difficult to understand content organization. Additionally, some content is read out that is not visible on screen.

A number of other issues were found that will make it difficult for users with a variety of disabilities from effectively using the system, including missing PDF titles and insufficient color contrast.

To improve access for users with disabilities, UARC recommends a full WCAG 2.0 AA evaluation and that the problems discovered be remediated.

Note 1: For the purposes of this high-level review, "Young Spanish-English speaking children's reading attitudes in relation to language skills" was used as an example of Article pages and PDFs, the Journal of Educational Research was used as an example of Journal pages, and Journal of Educational Research, Vol. 59, Issue 3 was used as an example of Issue pages.

Note 2: The "Only show content I have access to" checkbox on the Search Results page was not functional when this evaluation was conducted, and was therefore not reviewed.

High-Level Findings

Conformance

- On the Journal and Issue pages, there is no way to pause, stop, or hide auto-rotating images on the left side of the page. [[WCAG 2.0 SC 2.2.2](#), [WCAG 2.0 CR 5](#)]

Document Structure

- Headings are not correctly used to organize content. [[WCAG 2.0 SC 1.3.1](#)]
 - "Discover. Learn. Share." on Home page shouldn't be a heading
 - Footer headings (e.g., "Information for") should be h2s, not h3s
 - "Taylor & Francis Online" at top of Home page should be h1
 - "Browse by your specialist subject" and "Trending research" on Home page, "Latest articles", "Explore", and "Browse journals by subject" on Issue page, and "Educational Research" and "People also read" on Article page should be h2s, not h1s
 - "Articles" and "Call for papers" should be h2s on Issue page
 - The References in the sidebar of the Interactive PDF Reader should not be headings
- On the Home page, specialist subjects should be a single list (not four lists, with a different programmatic list for each visual column). [[WCAG 2.0 SC 1.3.1](#)]
- On the Home page, "3,800,000+ articles" shouldn't be a one-item list. [[WCAG 2.0 SC 1.3.1](#)]
- On the Issue and Article pages, Views, CrossRef Citations, and Altmetric score should be coded into a list. [[WCAG 2.0 SC 1.3.1](#)]
- No programmatic relationship (headings, lists, etc.) is provided to connect or organize content under "Trending research" on Home page; content under "Latest articles", "Explore", or for Articles within an Issue on Issue page; or content under "People also read" on Article page. [[WCAG 2.0 SC 1.3.1](#)]
- On the Journal, Issue, and Article pages, content of "This Journal" dropdown is read out by screen readers when it is collapsed. [[WCAG 2.0 SC 1.3.2](#)]
- On the Journal page, search fields are read out by screen reader before Journal name (e.g., "This Journal" has no referent). [[WCAG 2.0 SC 1.3.2](#)]
- On the Interactive PDF Reader, content is read out by screen readers that is not visible on the screen. [[WCAG 2.0 SC 1.3.2](#)]
- Tables in PDFs are not read out to screen reader users when the Interactive PDF Reader is used (users are instead prompted to download a separate CSV file, which presents an additional and unnecessary step, and requires that the user has software to view CSV files available). [[WCAG 2.0 SC 1.3.1](#)]
- PDFs are not fully tagged for accessibility (e.g., tables are not tagged). [[WCAG 2.0 SC 1.3.1](#)]
- PDFs are not titled (file is set to show file name instead of document title as window title). [[WCAG 2.0 SC 2.4.2](#)]

Keyboard Support

- Focus is not sufficiently visible on a variety of content. [[WCAG 2.0 SC 2.4.7](#)]

- Search buttons throughout the site
- "Open access information" link/bar on Home page
- Tabs ("Articles" and "Databases") and selected item in dropdowns (Order By and number per page) on Search Results page
- Green and blue buttons (e.g., "Submit an article", "Journal homepage", etc.) on Journal, Issue, and Article pages
- "This Journal" dropdown on Issue and Article pages
- Tabs ("Volume 59, 2017", "Vol 58, 2016", "Issue 3", "Issue 2", etc.) on Issue page
- Sidebar links (e.g., "In this article", "Abstract", etc.), selected tab (e.g., "Full Article"), and "PDF" button on Article page
- "CSV" and "Display Table" buttons in Figures & Data section of Article page
- Citations circles on Metrics section of Article page
- "Enter search term" input on Advanced Search page
- The "informa" expander at top of page Home page cannot be opened or closed via keyboard. [[WCAG 2.0 SC 2.1.1](#)]
- Filters (e.g., "Subject", "Published in", "Publication date") on the Search Results page cannot be operated via keyboard. [[WCAG 2.0 SC 2.1.1](#)]
- Arrows to scroll tabs on Issue page cannot be operated via keyboard. [[WCAG 2.0 SC 2.1.1](#)]
- Share button/dropdown on Article page cannot be operated via keyboard. [[WCAG 2.0 SC 2.1.1](#)]
- Contents of Display Table lightbox in Figures & Data section of Article page cannot be reached via keyboard. [[WCAG 2.0 SC 2.1.1](#)]
- On Home page, keyboard focus goes to hidden/off-screen content (e.g., "About Us", "Investor Relations", and "Talent" links in the "informa" expander at top of page when collapsed). [[WCAG 2.0 SC 2.4.3](#)]
- On the Issue page, keyboard focus moves through all tabs, even though most are hidden (it brings them on screen), forcing users to tab through an inordinately large number of elements. [[WCAG 2.0 SC 2.4.3](#)]
- On the Article page, focus goes to lightboxes for references when they are hidden. [[WCAG 2.0 SC 2.4.3](#)]
- On the Figures & Data section of Article page, focus is not restricted to Display Table lightboxes when they are open. [[WCAG 2.0 SC 2.4.3](#)]
- On the Advanced Search page, the focus order for radio buttons and dropdowns under "Publication Date" may be confusing to screen reader users (focus goes to dropdowns for options that aren't selected). [[WCAG 2.0 SC 2.4.3](#)]
- On the Article page, focus incorrectly goes to non-interactive content in Reference lightboxes (e.g., the reference text itself). [[WCAG 2.0 SC 2.4.3](#)]
- On the Search Results and Article pages, switching tabs unexpectedly resets focus to top of page. [[WCAG 2.0 SC 2.4.3](#)]
- On the Article page, the "Back to top" button doesn't reset focus to top of page. [[WCAG 2.0 SC 2.4.3](#)]
- On the Metrics section of the Article page, focus goes to non-interactive content (e.g., Citations circles). [[WCAG 2.0 SC 2.4.3](#)]
- On the Journal page, search fields receive focus before Journal name (e.g., "This Journal" has no referent). [[WCAG 2.0 SC 2.4.3](#)]

- On the Interactive PDF Reader, focus goes to content that is not visible on the screen. [[WCAG 2.0 SC 2.4.3](#)]
- On Article page, reference lightboxes cannot be easily closed via keyboard (no keyboard access to close buttons). [[WCAG 2.0 SC 2.1.1](#)]
- On the Advanced Search page, there are a variety of focus issues with the Citation Search dropdown. [[WCAG 2.0 SC 2.4.3](#)]

Forms and Data Submission

- On the Search Results page, search dropdowns are not programmatically labeled. [[WCAG 2.0 SC 3.3.2](#)]
- On Journal, Issue, and Article pages, "This Journal" dropdown and options are not programmatically labeled (screen reader reads them out as "Read Only Blank"). [[WCAG 2.0 SC 3.3.2](#)]
- On the Search Results page, labels for dropdowns and text inputs under "Modify your search" do not provide any means to associate them with each other (i.e., cannot determine which text input goes with which dropdown via screen reader). [[WCAG 2.0 SC 3.3.2](#)]

Images

- On Home, Search Results, Journal, and Issue pages, checkmarks and open-access icons lack alternative text. [[WCAG 2.0 SC 1.1.1](#)]
- Social media icons in footer lack alternative text. [[WCAG 2.0 SC 1.1.1](#)]
- Images on left side of Journal and Issue pages lack alternative text. [[WCAG 2.0 SC 1.1.1](#)]
- "Check for updates" button on Article page lacks alternative text. [[WCAG 2.0 SC 1.1.1](#)]
- Images under "Trending research" section on Home page (e.g., "Opening up choices for today's researcher", "Top Secret") lack alternative text. [[WCAG 2.0 SC 1.1.1](#)]
- Images of text are used instead of styled text for content under "Trending research" section on Home page (e.g., "Opening up choices for today's researcher", "Top Secret"). [[WCAG 2.0 SC 1.4.5](#)]
- Images of text are used instead of styled text for content on the left side of Journal and Issue pages. [[WCAG 2.0 SC 1.4.5](#)]
- On the Article page, an image of text is used instead of styled text for the "Check for updates" button. [[WCAG 2.0 SC 1.4.5](#)]

Color and Visual Characteristics

- Green text on white and white symbols on green (e.g., checkmarks, "Full access" on Article page) and white symbols on orange (e.g., open-access icons) have insufficient contrast. [[WCAG 2.0 SC 1.4.3](#)]

Custom Elements and Dynamic Content

- On the Journal and Issue page, there is no way to pause or stop auto-rotating images on the left side of the page. [[WCAG 2.0 SC 2.2.2](#), [WCAG 2.0 CR 5](#)]
- Custom expanders (e.g., volumes on Journal page) do not have roles or values provided (i.e., screen reader users are not informed that they expand/collapse and whether they are expanded/collapsed). [[WCAG 2.0 SC 4.1.2](#)]
- On the Search Results page, Order By and number per page are identified by screen readers as links, instead of dropdowns. [[WCAG 2.0 SC 4.1.2](#)]

- On the Article page, the PDF button is incorrectly identified by screen readers as a tab. [[WCAG 2.0 SC 4.1.2](#)]
- Tabs on the Issue page do not have roles or values provided (i.e., screen reader users are not informed that they are tabs and whether they are selected). [[WCAG 2.0 SC 4.1.2](#)]
- On Home page, using arrow keys to move through autocomplete search suggestions reads out gibberish to screen reader (e.g., typing "test" and hitting the down arrow causes SR to say "test slash action slash do search target equals title search and series key equals and twenty"). [[WCAG 2.0 SC 4.1.2](#)]
- On the Search Results page, no feedback is provided to screen reader users when search terms are added or removed or when changing order using the Order By or # per page dropdowns. [[WCAG 2.0 SC 4.1.2](#)]

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