

# High-Level Accessibility Evaluation (WCAG 2.1)

Cambridge Core Platform

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**Prepared for:**

BTAA-Library Accessibility Alliance

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## SUMMARY

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This report reflects the findings of a high-level assessment of the Cambridge Core Platform for its conformance with the W3C Web Content Accessibility Guidelines version 2.1 (WCAG 2.1).

There are very few WCAG 2.1 compliance issues with the platform, and the few that are present are programmatic in nature and should be relatively easy to fix. However, creating an accessible platform is a constantly moving goalpost, so it is important to keep in mind that there are continual updates to the WCAG standards that may require more work in the future. Below are the most critical issues to focus on correcting to improve access for all potential users of the system.

### Top Findings

1. **Information and Relationships:** There seems to be an issue with screen reader support that causes elements to be read out of order. It may be a bug with the browser and screen reader combination that we used during testing, however it is something that needs to be addressed in order to support users that need screen readers.
2. **Compatibility:** There are very few issues with this system overall and the only compliance issue that stands out is around the use of unique id's. This is a relatively minor issue and is primarily programmatic and should not cause a serious problem with usability or accessibility. For an in-depth guide to ARIA implementation, please see the [WAI-ARIA Authoring Best Practices Guide from W3](#).
3. **Color Contrast:** At a cursory glance, the colors used on the site do not seem to fall outside of acceptable contrast ratios, with the potential exception of the lightest gray used for subheadings/text. The errors should be reviewed manually for accuracy, but it might just be a problem with the automatic analysis.

### Best Practices

Simple corrections that can make a sizable difference.

- ◆ All page content should be contained by landmarks.
- ◆ Document should have one main landmark.
- ◆ Heading Levels should only increase by 1.

## ACCESSIBILITY FINDINGS

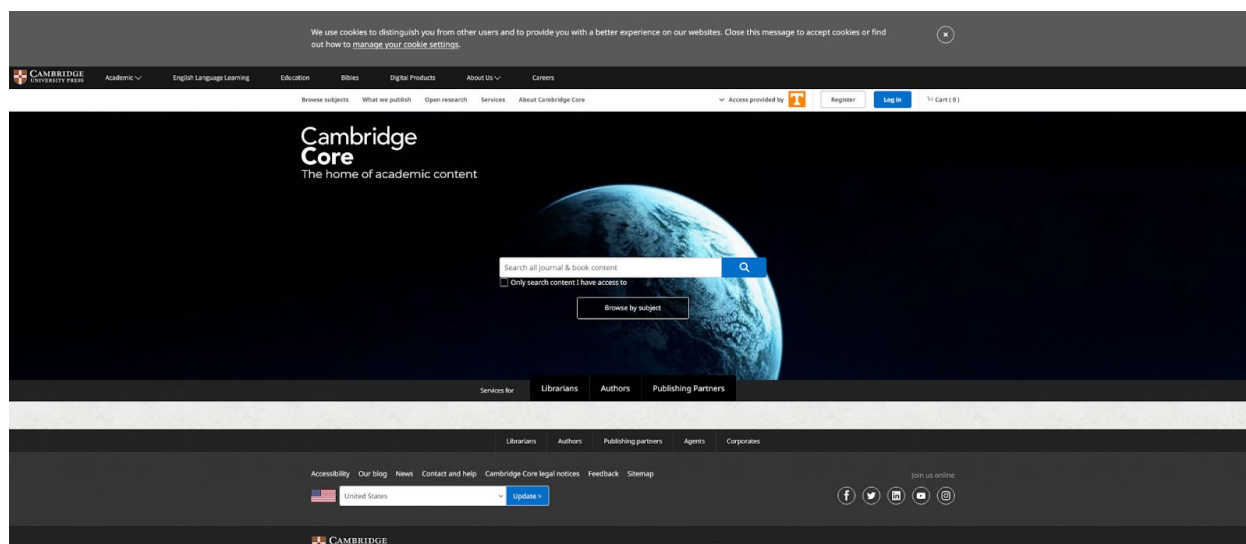
This report was conducted against the Cambridge Core Platform and covers a selection of pages and features that were to be tested as a representative sample of the database's conformance to the WCAG 2.1 AA standards.

The resource was reviewed using a combination of manual and automatic review tools and assistive technologies, including the WAVE Accessibility Assessment tool, Axe Accessibility Assessment tool, WCAG Color Contrast Checker, and NVDA screen reader. All problems identified by automatic tools were double checked manually. This evaluation was performed using Firefox on Windows 10.

Below are the errors revealed during the accessibility evaluation of the Cambridge Core Platform. **Flagged issues** should be reviewed manually for accuracy as addressing these would create stronger code.

### 1. Initial Interface

**Test Case:** Test initial interface/landing page to ensure menus, sub-menus, search box, images, icons, etc. are accessible.



**SC 1.3.1:** Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.

- The location could not be determined programmatically.

### Flagged Issues

- On initial load of the page, the screen reader starts reading from the social media links area which breaks logical flow. It never goes through the primary navigation or the search area. The reason for this behavior could not be determined in this analysis and may be a bug.

**SC 1.4.3:** Elements must have sufficient color contrast.

- This issue has 18 locations throughout the page.

### Flagged Issues

- Element's background color could not be determined due to a background image
- Unable to determine contrast ratio

**SC 2.4.7:** Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.

- `li:nth-child(1) > .hide-text.icon[href$="www.cambridge.org"]`

### Flagged Issues

- The placement of the focus ring for the social media icon links is a little off. This isn't necessarily breaking compliance, but it's probably something to look into.

**SC 2.4.9:** Links with the same name must have a similar purpose.

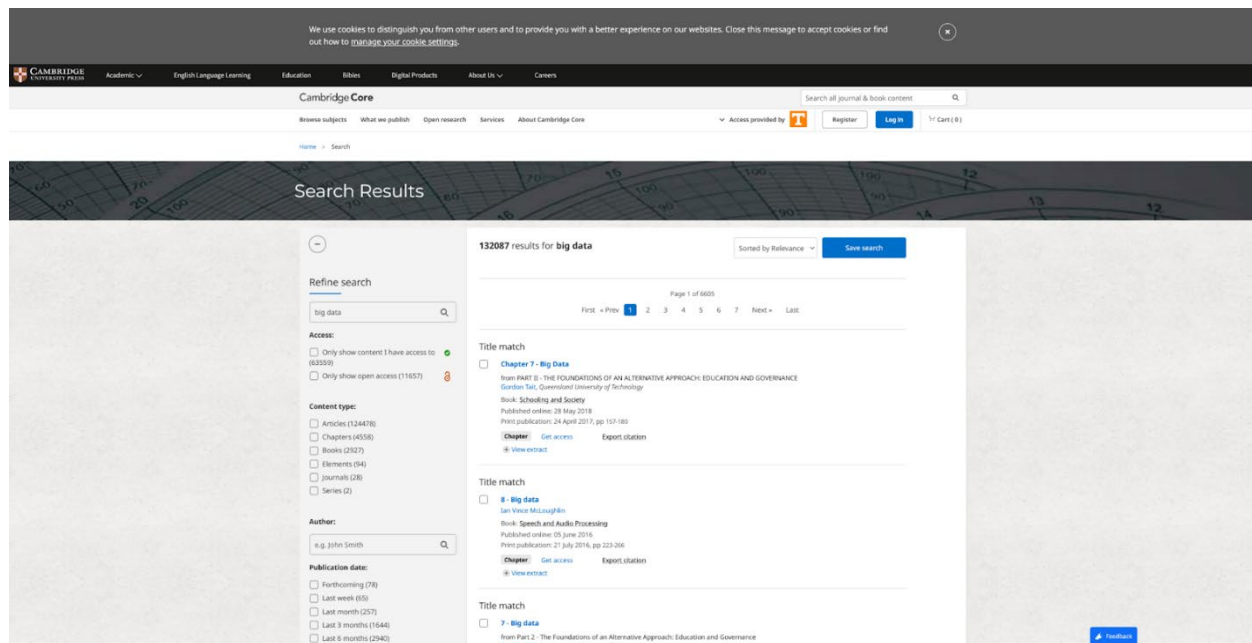
- `li:nth-child(1) > .hide-text.icon[href$="www.cambridge.org"]`

### Flagged Issues

- Check that links have the same purpose or are intentionally ambiguous.

## 2. Search Results

**Test Case:** From the initial landing page, conduct a search for: Big Data. Test search results page, including filters/refine search (Limits to Access/what UTK has; Content Type: book; Date: Last 3 years;) and sort by options.



**SC 1.3.1:** Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.

- The location could not be determined programmatically.

#### Flagged Issues

- The screen reader reads part of the alert, then skips to the navigation, and then skips back to the rest of the alert at a certain point.

**SC 1.3.1:** Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.

- The location could not be determined programmatically.

#### Flagged Issues

- Keyboard focus begins at the search bar instead of the top of the page.

**SC 1.3.1:** Ensures <dl> elements are structured correctly.

- <dl class="accordion do-not-mathjax" data-accordion="">

#### Flagged Issues

- When not empty, element does not have at least one <dt> element followed by at least one <dd> element.

**SC 1.4.3:** Elements must have sufficient color contrast.

- This issue has 22 locations throughout the page.

#### Flagged Issues

- Element's background color could not be determined due to a background image
- Unable to determine contrast ratio

**SC 2.4.7:** Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.

- `li:nth-child(1) > .hide-text.icon[href$="www.cambridge.org"]`

#### Flagged Issues

- The placement of the focus ring for the social media icon links is a little off. This isn't necessarily breaking compliance, but it's probably something to further investigate.

**SC 2.4.9:** Links with the same name must have a similar purpose.

- `li:nth-child(1) > .hide-text.icon[href$="www.cambridge.org"]`

#### Flagged Issues

- Check that links have the same purpose or are intentionally ambiguous.

**SC 4.1.1:** Ensures every id attribute value used in ARIA and in labels is unique.

- `input[placeholder="Add keyword"]`

#### Flagged Issues

- Check that links have the same purpose or are intentionally ambiguous.

**SC 4.1.1:** Ensures every id attribute value is unique.

- `body > .flash-message-container[role="alert"] > .flash-message > .ajaxMessages`
- `:root`

#### Flagged Issues

- Document has multiple static elements with the same id attribute: `ajaxMessages`.
- Document has multiple static elements with the same id attribute: `Layer_1`.

## 3. Individual Results

**Test Case:** Select an individual Book & test result landing page & an ebook full text

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Series: Elements in the Philosophy of Science

## Big Data

Published online by Cambridge University Press: 29 January 2021

Wolfgang Pietsch

Show author details

### Summary

Big Data and methods for analyzing large data sets such as machine learning have in recent times deeply transformed scientific practice in many fields. However, an epistemological study of these novel tools is still largely lacking. After a conceptual analysis of the notion of data and a brief introduction into the methodological dichotomy between inductivism and hypothetico-deductivism, several controversial theses regarding big data approaches are discussed. These include, whether correlation replaces causation, whether the end of theory is in sight and whether big data approaches constitute entirely novel scientific methodology. In this Element, I defend an inductivist view of big data research and argue that the type of induction employed by the most successful big data algorithms is variational induction in the tradition of Mill's methods. Based on this insight, the before-mentioned epistemological issues can be systematically addressed.

Element Metrics

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### Keywords

big data machine learning induction causation theory-science

Type	Element
Information	Series: Elements in the Philosophy of Science DOI: <a href="https://doi.org/10.1017/9781108588676">https://doi.org/10.1017/9781108588676</a> Online ISBN: 9781108588676 Publisher: Cambridge University Press Print publication: 18 February 2021

12 Cited by

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Book

**SC 1.3.1:** Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.

- The location could not be determined programmatically.

### Flagged Issues

- The screen reader reads part of the alert, then skips to the navigation, and then skips back to the rest of the alert at a certain point.

**SC 1.3.1:** Ensures <dt> and <dd> elements are contained by a <dl>.

- .related-content > dt

### Flagged Issues

- Description list item does not have a <dl> parent element.

**SC 1.4.3:** Elements must have sufficient color contrast.

- This issue has 14 locations throughout the page.

### Flagged Issues

- Element's background color could not be determined due to a background image
- Unable to determine contrast ratio

**SC 2.4.7:** Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.

- `li:nth-child(1) > .hide-text.icon[href$="www.cambridge.org"]`



### Flagged Issues

- The placement of the focus ring for the social media icon links is a little off. This isn't necessarily breaking compliance, but it's probably something to address.

**SC 2.4.9:** Links with the same name must have a similar purpose.

- `li:nth-child(1) > .hide-text.icon[href$="www.cambridge.org"]`

### Flagged Issues

- Check that links have the same purpose or are intentionally ambiguous.

**SC 4.1.2:** Ensures ARIA attributes are allowed for an element's role

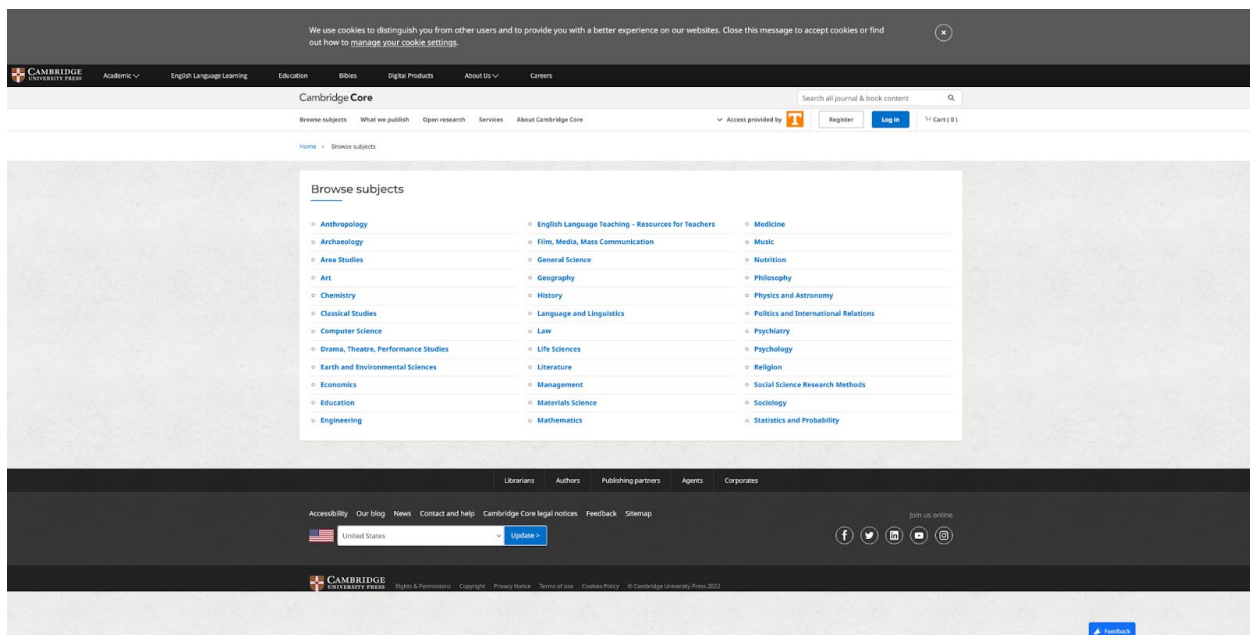
- `.tabs__tab[role="none"][data-v-0a5db28a=""]:nth-child(1)`
- `.cited-by__link`

### Flagged Issues

- ARIA attribute is not allowed: `aria-selected="true"`
- `aria-label` attribute is not well supported on a `a` with no valid role attribute.

## 4. Browse Subjects

**Test Case:** Test browse Subject page.



**SC 1.3.1:** Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.

- The location could not be determined programmatically.

**Flagged Issues**

- The screen reader reads part of the alert, then skips to the navigation, and then skips back to the rest of the alert at a certain point.

**SC 1.4.3:** Elements must have sufficient color contrast.

- This issue has 50 locations throughout the page.

**Flagged Issues**

- Element's background color could not be determined due to a background image
- Unable to determine contrast ratio

**SC 2.4.9:** Links with the same name must have a similar purpose.

- `li:nth-child(1) > .hide-text.icon[href$="www.cambridge.org"]`

**Flagged Issues**

- Check that links have the same purpose or are intentionally ambiguous.

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