



Accessibility Report

Canvas Digital Learning Platform

Date of Report: 15th July 2020

Date of Audit: 6th - 14th July 2020

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Executive Summary

This report describes the conformance of the Canvas website with W3C's Web Content Accessibility Guidelines (WCAG). The review process is described in Section 5 below and is based on evaluation described in Accessibility Evaluation Resources.

Based on this evaluation, the Canvas website is substantially compliant in meeting WCAG 2.1, Conformance Level AA. There are some areas that require urgent action to meet the required level. Detailed review results are available in Section 6 below. Resources for follow-up study are listed in Section 7 below.

Feedback on this evaluation is welcome.

Background of this evaluation

Evaluation of web accessibility requires a combination of semi-automated tools and manual evaluation by an experienced reviewer.

As a third-party provider of a learning platform Canvas do perform in-house accessibility audits. Canvas also develop and release code on a regular basis. This audit and report are part of the universities legal obligation to provide an Accessibility Statement for any websites we provide.

The evaluation results in this report are based on evaluation conducted on the following date(s): 6th July – 14th July 2020. The website may have changed since that time.

Scope of Review

- Canvas – A third party digital learning platform used deliver and support learning to enrolled students of Swansea University. The platform also delivers staff training.
- <https://canvas.swansea.ac.uk/>
- Pages included in the review where as follows:
 - Dashboard
 - Calendar Page
 - Studio Page
 - Inbox
 - Course Landing Page
 - Course Overview
 - Modules Page
 - Module Content Page and PDF download
 - Announcements Page
 - Quiz Pages
 - Assignments Page
 - Reading List Page
 - Turnitin Submission Page
- All pages were subject to a manual review supported by evaluation tools.
- Due to the nature of Canvas being a content creation tool and size of the website a “dip test” approach was used to test a selection of pages that most users would heavily interact and be reflective of a common user journey.
- Canvas uses a number of third-party integrations known as LTI (Learning Tool Integrations). These tools have not been tested as part of this audit.

Reviewer(s)

Chris Sherwood, Senior UX Designer

Contact Information

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Reviewers Areas of Expertise

- Certified User Experience Designer
- Front End Web Development Experience
- User Research
- User Testing
- Building Empathy with Users
- Web technologies
- Validation tools for Web technologies
- Web Content Accessibility Guidelines and Techniques
- Approaches for evaluating Web accessibility
- Use of a variety of evaluation tools for Web site accessibility

Affiliation

The reviewer works for Software Development, Swansea University.

Review Process

- The website stated was tested to conformance against WCAG 2.1 Level A and WCAG 2.1 Level AA.
- A selection of 12 pages were subjected to an automated check using the Microsoft Accessibility Insights Tool.
- Manual evaluation was conducted on each page using the Microsoft Accessibility Insights Tool assessment process.
- In some cases, the Microsoft Accessibility Insights Tool did not function correctly. In these cases, the Deque AXE manual assessment tool was used.
- Throughout this process a POUR checklist based on GDS (Government Digital Service) was referred to and used to manually review the pages.
- The NVDA Screen reader was used complete a consistent set of steps including navigation, interaction, time limits and error recovery.
- The manual reviews where conducted on a Windows Laptop and Apple iPhone 8.

Results and Recommended Actions

The Canvas website is substantially compliant in meeting the required WCAG 2.1 AA criteria and adheres to many of POUR principles to ensure all users can use the site effectively.

The typical needs of a disabled users are addressed by the application.

Deaf users

- Alt formats for audio content – unfortunately, no samples confirmed if this was available. But the functionality exists to provide transcripts

Dyslexic users

- Remove stylesheets to unclutter – Stylesheet can be removed and text spacing adjusted.
- Needs simple understandable layouts – clean and simple layouts are used.
- Uses magnifying software – the site can be enlarged to 200%.
- Reducing complexity - Consistent Labelling and Navigation is available.

Blind Users

- Alternative formats - The application provides alternative formats for images and uses decorative and meaningful images correctly.
- Assistive Technology - Screen readers are supported.
- Robust HTML - Aria attributes are used correctly in the majority of the site.

Partially Sighted Users

- Usable controls - Strong Contrasts are used in many of the controls.
- Interface - Clean uncluttered pages layouts are used.

Motor Functions Impaired Users

- Navigation helpers - Skip to main is supported.
- Support for non-mouse usage - Keyboard navigation is supported.

However, the application is not fully compliant. The areas to prioritize, recommended actions and areas of responsibility are listed below.

WCAG 2.1 success criterion: 1.1.1 Non-text Content

Appropriate alternative text

Images are also not coded properly as meaningful or decorative. Some images alt tags have been completed with a file name rather than a representative description.

The application supports content creation by editors for learning materials. In the sample pages including course landing page and course content errors were present.

These included:

- 7 images not coded as decorative or meaningful, so rendered by a screen reader (in some cases a long file name).
- 11 images coded as meaningful incorrectly or without valid alt texts.

In the worse cases these images served no purpose to screen readers and were purely decorative so should be ignored.

Recommended Actions

Remove any references to “content-divider.png” and use valid HTML <hr> tag. Images such as icons used within the course blueprint that are not meaningful should use a blank alt tag. Any meaningful images must have a short valid description.

A process of awareness raising should be undertaken as soon as possible with editors to improve the quality of content created. If left unchecked this just builds accessibility debt for the institution and a bad experience for users.

Responsibility: Canvas Team (SU) and Content Editors

WCAG 2.1 success criterion: 1.3.1 Info and Relationships

Headings Misuse, Aria tag review required

The dashboard heading is not visually presented as a H1 and some pages omit H2 tags. Inline CSS and bold tags have been used to style content in some places with Canvas and some text areas. Some pages have aria tags that is not a focusable element. Quiz question landmarks region where not descriptive of content.

The majority of the application is structured correctly but some content is styled with headings (H4) for purely visual purposes, not in order of importance. If a screen reader navigates a page using headings this will be made more difficult and confusing.

One page in course content did not have the correct HTML structure in that a H2 tag had been omitted from the page. A course overview page used a H4 tag to style text rather than as a heading.

Recommended Actions

A process of awareness raising should be undertaken as soon as possible with editors to make them aware that a page must be a good experience for all types of user.

Contact canvas and request fixes.

Responsibility: Canvas and Content Editors

WCAG 2.1 success criterion: 1.4.1 Use of Color

Using color as meaning

The Calendar Appointments are linked to Calendars by color. E.g. MN-2518 is denoted by a green border and text in calendar day view.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Canvas

WCAG 2.1 success criterion: 1.4.3 Contrast (Minimum)

Text and background Contrast

Some links, buttons and text content do not meet the contrast required across the website. Pages including Studio, Dashboard and Calendar featured button texts which currently fail WCAG AA contrast guidelines. Some content has also been created using text that fails contrast guidelines in the sample pages tested.

Recommended Actions

Contact canvas and request fixes, check the theme colors currently being used against WCAG contrast checker.

Responsibility: Canvas Team (SU) and Canvas

WCAG 2.1 success criterion: 1.4.10 Reflow

Flipping content horizontally and vertically without any side scrolling

Course title text and some buttons do not reflow effectively and requires scrolling in two directions. Some pages including Studio and course landing page required a side scroll to access controls as they were off screen or view a course title in full.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Canvas

WCAG 2.1 success criterion: 2.1.1 Keyboard

Keyboard Navigation

The calendar page has some controls that cannot be navigated by keyboard. Users are warned of this and offered an agenda view.

The calendar view does not support full keyboard navigation. Individual days cannot be navigated to and appointments added by using + icon. The system shows a message on tab telling users to access agenda for more accessible experience.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Canvas

WCAG 2.1 success criterion: 2.4.4 Link Purpose

The purpose of links is not described by link text alone in some pages of module content. The course template page features adjacent links, one with a link text, the other with an iconic representation of that link, pointing to the same destination.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Content Editors

WCAG 2.1 success criterion: 2.4.6 Headings and Labels

Headings Misuse

The majority of the application is structured correctly but some content is styled with headings (H4) for purely visual purposes, not in order of importance. If a screen reader navigates a page using headings this will be made more difficult and confusing.

One page in course content did not have the correct HTML structure in that a H2 tag had been omitted from the page. A course overview page used a H4 tag to style text rather than as a heading.

Some pages have headings that do not have content.

Recommended Actions

A process of awareness raising should be undertaken as soon as possible with editors to make them aware that a page must be a good experience for all types of user.

Contact canvas and request fixes.

Responsibility: Canvas and Content Editors

WCAG 2.1 success criterion: 3.3.4: Error Prevention (Legal, Financial, Data)

Uninformative Quiz Error Messages

The quiz tested only showed pop up warning user about completing a form submission. Even when answers had been entered, the warning did not inform the user of errors made.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Canvas

WCAG 2.1 success criterion: 4.1.1 Parsing

A duplicate ID us used on calendar pages.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Canvas

WCAG 2.1 success criterion: 4.1.2 Name, Role, Value

Frame titles

Canvas uses external tools to provide functionality. Often these tools are announced as “Tool Content”. The iFrame should describe the service it provides. Iframes for LTI do not use a title that describes content accurately, all LTI’s are described as “tool content”.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Canvas

WCAG 2.1 success criterion: 4.1.3: Status Messages

Time Limit Alerts for Assistive Technology

The Studio has error messages that need to receive focus by screen readers.

Quiz question pages are timed, but do not have status messages or alerts for time limits available without focus being applied to them.

When testing the quiz functionality, it was made clear visually that a time limit had been set. Testing with the NVDA screen reader gave no alerts or updates of the time limit. Time limits would normally be an issue with accessibility, but tests in this case are exempt. However, an alert or status must be provided via assistive technology.

Error Alerts for Assistive Technology

Testing quiz functionality with a screen reader also exposed a submission confirmation dialog. The dialog visually gave more information than the screen reader regarding test answer errors.

Recommended Actions

Contact canvas and request fixes.

Responsibility: Canvas

PDF and other documents

Power point Presentations

This is a learning platform providing support for lectures. Lectures notes are provided in the form of power point files. When tested in Powerpoint Accessibility Checker a number of errors were reported.

Recommended Actions

Contact content editors and ask them to run built-in accessibility checks in powerpoint.

Responsibility: Content Editors

PDF Documents

This is a learning platform uses a number of third-party PDF's to reference articles and learning materials. When run through the Adobe accessibility checker errors were present.

Recommended Actions

Contact content editors and ask them to source accessible forms of content from third parties. If this is not possible then the module should make users aware of the university transcription service for students with additional needs.

Responsibility: Canvas Team (SU) and Content Editors

Summaries of Test Plans, Reviews, Automated Tests can be found in the Appendix.

7. References

- Web Content Accessibility Guidelines (WCAG) Overview
<https://www.w3.org/WAI/intro/wcag>
- Web Content Accessibility Guidelines 2.1
<https://www.w3.org/TR/WCAG21/>
- <https://www.deque.com/>
- <https://www.nvaccess.org/>
- <https://accessibilityinsights.io/>
- <https://www.deque.com/axe/>

8. Appendices

- Microsoft Insights Accessibility Report Summaries
- POUR Checklist
- Screen Reader Test Plan
- Screen Reader Test Results