



Perusall Accessibility Conformance Report WCAG Edition

(Based on VPAT® Version 2.4)

Name of Product/Version: app.perusall

Report Date: December 23rd, 2020

Product Description: Web application aimed at change the nature of reading and education. They are changing reading from the traditional solitary experience to an engaging and collective one. So all students do the reading, come to class prepared, and are motivated to do so because they care about the content.

Contact information: Independent Accessibility Consultant

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Notes: Equal Entry LLC, a third party accessibility consultant, worked with Perusall to define a set of User Scenarios (Appendix A) to assess app.perusall.

Perusall reviewed the detailed issue list, prioritized and fix several items. Exceptions in this document are pending accessibility issues, to be addressed in future product releases to app.perusall. This report, generated on December 23rd, 2020, supersedes any previous report covering these same scenarios.

Evaluation Methods Used: Manual testing using various browser agents, assistive technologies and inspection tools. Scenarios are in Appendix A. Additional details are in Appendix B.

Applicable Standards/Guidelines:

This report covers the degree of conformance for the following accessibility standard/guidelines:

Web Content Accessibility Guidelines 2.1 at <https://www.w3.org/TR/WCAG21/>, at level A and AA.

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.

- **Partially Supports:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG Level AAA.

WCAG 2.1 Report

Note: When reporting on conformance with the WCAG 2.1 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG Conformance Requirements](#).

Success Criteria

Success Criterion	Conformance Level	Remarks
1.1.1 Non-text Content (Level A)	Partially Supports	Scenario 1: Non-LMS setup requires CAPTCHA that relies on sight alone
1.2.1 Audio-only and Video-only (Prerecorded) (Level A)	Supports	Transcripts can be added as optional reading material, dependent on content author or course instructor to providing
1.2.2 Captions (Prerecorded) (Level A)	Supports	Closed Captioning is provided, but dependent on source content
1.2.3 Audio Description or Media Alternative (Prerecorded) (Level A)	Supports	Transcripts can be provided as optional reading or via YouTube description
1.2.4 Captions (Live) (Level AA)	Not Applicable	Does not contain Live Streamed media

Success Criterion	Conformance Level	Remarks
<u>1.2.5 Audio Description (Prerecorded)</u> (Level AA)	Supports	Video with Audio Descriptions can be added, but is dependent on the course instructor to provide
<u>1.3.1 Info and Relationships</u> (Level A)	Supports	Information, structure, and relationships conveyed through presentation can be programmatically determined
<u>1.3.2 Meaningful Sequence</u> (Level A)	Supports	Content is presented visually as well as programmatically in a logical sequence
<u>1.3.3 Sensory Characteristics</u> (Level A)	Not Applicable	No instructions or visuals convey meaning through shape, size, location, orientation or sound
<u>1.3.4 Orientation</u> (Level AA)	Supports	Respects user's choice of landscape or portrait
<u>1.3.5 Identify Input Purpose</u> (Level AA)	Supports	Autocomplete is supported via a programmatic link purpose
<u>1.4.1 Use of Color</u> (Level A)	Supports	Information communicated visually with color is made available through alternative means as well
<u>1.4.2 Audio Control</u> (Level A)	Supports	User has the ability to pause/stop and adjust the volume independently from the system volume
<u>1.4.3 Contrast (Minimum)</u> (Level AA)	Supports	Color contrast of text against its background meets or exceeds guideline

Success Criterion	Conformance Level	Remarks
		minimums, when Increase color contrast for increased visibility is selected
<u>1.4.4 Resize text</u> (Level AA)	Supports	Text can be resized up to 200 percent without loss of content or functionality
<u>1.4.5 Images of Text</u> (Level AA)	Not Applicable	No images of text are used to convey information
<u>1.4.10 Reflow</u> (Level AA)	Supports	Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions
<u>1.4.11 Non-text Contrast</u> (Level AA)	Supports	Good color contrast is used for non-text elements
<u>1.4.12 Text Spacing</u> (Level AA)	Supports	Good text spacing is used
<u>1.4.13 Content on Hover or Focus</u> (Level AA)	Supports	Tooltips are dismissible, hoverable and persistent
<u>2.1.1 Keyboard</u> (Level A)	Partially Supports	Scenario 4: Content selection for commenting is dependent on underlying markup of the content, so not as accurate as a mouse user can be in all content
<u>2.1.2 No Keyboard Trap</u> (Level A)	Supports	No Keyboard traps were found

Success Criterion	Conformance Level	Remarks
<u>2.1.4 Character Key Shortcuts</u> (Level A)	Supports	Custom keyboard shortcuts are appropriate and are active only on focus
<u>2.2.1 Timing Adjustable</u> (Level A)	Supports	While timers are used, they meet all WCAG requirements for their length or adjustability
<u>2.2.2 Pause, Stop, Hide</u> (Level A)	Not Applicable	Does not contain auto-updating, scrolling or flashing content
<u>2.3.1 Three Flashes or Below Threshold</u> (Level A)	Not Applicable	Does not contain Flashing text or other visuals
<u>2.4.1 Bypass Blocks</u> (Level A)	Supports	Bypass blocks are used effectively throughout to aid in navigation
<u>2.4.2 Page Titled</u> (Level A)	Supports	Titling is used effectively throughout to aid in understanding
<u>2.4.3 Focus Order</u> (Level A)	Supports	Focus Order is logical aiding in both navigation and understanding
<u>2.4.4 Link Purpose (In Context)</u> (Level A)	Supports	Link text was found to be accurate and clear
<u>2.4.5 Multiple Ways</u> (Level AA)	Supports	The user scenario S2: Course Creation (Instructor) for students to access directly at Perusall.com specifically addressed the need for an alternative method of finding a web page - Search

Success Criterion	Conformance Level	Remarks
<u>2.4.6 Headings and Labels</u> (Level AA)	Supports	Heading and labels are descriptive throughout to aid in understanding
<u>2.4.7 Focus Visible</u> (Level AA)	Supports	A visual focus indicator was used throughout to aid in navigation and understanding
<u>2.5.1 Pointer Gestures</u> (Level A)	Not Applicable	Multipoint or path-based gestures are not used
<u>2.5.2 Pointer Cancellation</u> (Level A)	Supports	Operations that use a single pointer execute on the up-events allowing for cancellation
<u>2.5.3 Label in Name</u> (Level A)	Supports	Programmatic names match visual labels
<u>2.5.4 Motion Actuation</u> (Level A)	Not Applicable	Device motion sensors are not used
<u>3.1.1 Language of Page</u> (Level A)	Supports	Language is programmatically expressed for assistive technologies at the product or page level
<u>3.1.2 Language of Parts</u> (Level AA)	Partially Supports	Scenario 4: Read Aloud language options are not expressed programmatically.
<u>3.2.1 On Focus</u> (Level A)	Supports	As component receives focus, they do not initiate a change of context

Success Criterion	Conformance Level	Remarks
<u>3.2.2 On Input</u> (Level A)	Supports	Controls have clear purpose and behavior
<u>3.2.3 Consistent Navigation</u> (Level AA)	Supports	Navigational mechanisms are visually and functionally consistent
<u>3.2.4 Consistent Identification</u> (Level AA)	Supports	Components that have similar functionality are visually and functionally consistent
<u>3.3.1 Error Identification</u> (Level A)	Supports	Input errors are clearly identified and described to the user in text
<u>3.3.2 Labels or Instructions</u> (Level A)	Supports	All user input components have clear labels and instructions
<u>3.3.3 Error Suggestion</u> (Level AA)	Supports	Users are provided suggestions for correcting errors
<u>3.3.4 Error Prevention (Legal, Financial, Data)</u> (Level AA)	Not Applicable	Does not contain legal commitments, financial transactions or user controllable data changes within a data storage system
<u>4.1.1 Parsing</u> (Level A)	Supports	Correct HTML 5 is used throughout
<u>4.1.2 Name, Role, Value</u> (Level A)	Partially Supports	Scenario 2: Combo boxes throughout Perusall are coded in a way that will be confusing for screen reader users (impacts Scenarios 2, 3, 4 and 6)

Success Criterion	Conformance Level	Remarks
<u>4.1.3 Status Messages</u> (Level AA)	Supports	Status messages were available programmatically

Appendix A:

Equal Entry LLC worked with Perusall to define the following User Scenarios to assess app.perusall.

The following Criteria were **Not Applicable** based on a review with Perusall that confirmed that current scenarios do not contain this functionality.

- 1.2.4 Captions (Live)
- 1.3.3 Sensory Characteristics
- 1.4.5 Images of Text
- 2.2.2 Pause, Stop, Hide
- 2.3.1 Three Flashes or Below Threshold
- 2.5.1 Pointer Gestures
- 2.5.4 Motion Actuation
- 3.3.4 Error Prevention (Legal, Financial, Data)

Scenarios

S1: Registration / Login

1. Open [Perusall login page](#)
2. Navigate to and activate **Register**, which will open [Account Registration](#)
3. Navigate to **Email** and enter: T
4. Without entering any additional data, navigate to and activate **Register**
5. Read error message(s), then navigate to **Email** and enter: A11y@EqualEntry.com
6. Navigate to **Password** and enter: A11yTesting!
7. Navigate to **Password (again)** and enter: A11yTesting!
8. Navigate to **First name** and enter: A11y
9. Navigate to **Last name** and enter: Tester
10. Without entering CAPTCHA data, navigate to and activate **Register**
11. Read error message then complete CAPTCHA
12. Activate **Register** to open [Welcome](#)
13. Read **Terms of Service** and **Privacy Policy**
14. Activate **OK**

15. Read about and then activate **Confirm my email address**
16. Navigate to and activate **User Profile menu | Sign out**
17. Return to [Perusall login page](#)
18. Navigate to and activate **Forgot your password?** to open [Reset your Password](#)
19. Navigate to **Email** and enter: A11y@EqualEntry.com
20. Activate **Email Reset Link**
21. Read confirmation message, then return to [Perusall login page](#)
22. Navigate to **Email** and enter: A11y@EqualEntry.com
23. Navigate to **Password** and enter: A11yTesting!
24. Activate **Sign In**

S2: Course Creation (Instructor) for students to access directly at Perusall.com

Scenario starts just as Scenario 1 ends. Assumes the creation of a new account, finishing the account setup and being led through the creation of their first course.

For retesting purposes -TesterHeather49@gmail.com was created as a registered but not setup account - DO NOT Complete setup

1. Open [Perusall login page](#) and login with A11y@EqualEntry.com / A11yTesting!
2. Read [Welcome to Perusall](#)
3. Navigate to and activate **Create or enroll in a course**
4. Activate **I am an instructor**
5. Navigate to **I want to create a course...** and select *for students to access directly at perusall.com*
6. Navigate to **Course name** and enter: Accessibility 101
7. Navigate to **Institution** and select *Perusall (Brookline, MA, US)*
8. Navigate to **Course start date** and set to 09/08/2020, confirming this is the Tuesday after the first Monday in September (the day after Labor Day and the first day of school)
9. Navigate to **Course end date** and set to 11/25/2020, confirming this is the Wednesday before the last Thursday of the month (the day before Thanksgiving)
10. Expand **I will upload my own course materials**
11. Read the message about how you will do that, then expand **Request a title not in the catalog**
12. Read what information must be supplied, then expand **Browse our catalog of available titles**
13. Navigate to **Search title** and enter: Freedom
14. Review the number of titles returned, then navigate to **Publisher** and select *Macmillan Learning*
15. Navigate to and select *Freedom Summer*
16. Navigate to and check **I represent that I am an instructor of this course at the institution listed above. Instructor accounts are subject to verification.**
17. Activate **Complete setup**
18. Activate **End Tour** - as it will be evaluated at a later scenario

S3: Course Home and Settings

Scenario starts just as Scenario 2 ends. Assumes an account and course has been created. The instructor is being led through the final setup of their first course. While a Tour is offered, we will decide for now and review in detail in S7.

For retesting purposes it might be needed to Return to [Library for course Accessibility 101](#) and delete all added content

1. If not already on [Accessibility 101 course home](#), open [Perusall login page](#) and login with A11y@EqaulEntry.com / A11yTesting! then navigate to Course home for course Accessibility 101
2. Navigate to and activate **Skip to main content**; find start of main content area; return to top of page
3. Navigate to each menu element in header (Perusall application home, breadcrumbs, keyboard shortcuts, Help, and the account profile menu)
4. Navigate the left-hand navigation control (Expand/collapse ability, My Courses, Course home, Settings, Gradebook, Student view, Notifications, Notes, Add to my calendar, Chat, Groups, Hashtags)
5. Read the inline help for Chat and Hashtags
6. Navigate to each of the Course home tab options (Get started, Library, Assignments, Students)
7. Navigate to and read the **Important messages**
8. Under **Get started** read the steps need to complete your course setup, and the Welcome to Perusall notification
9. Navigate to and activate the first arrow to **Get students enrolled**
10. Read the notification
11. Navigate to and activate the second arrow to **Choose course materials**, which will open [Library for course Accessibility 101](#)
12. Navigate to and activate **Add content | Documents from my computer**
13. Select the **Appl Phys A-Mater 2009 Tull 2.pdf** that was provided
14. Navigate to and activate **Add | Video**
15. Read the **Video** dialog then navigate to **Video URL** and enter: [https://youtu.be/ dqQb8iZtS4](https://youtu.be/dqQb8iZtS4)
16. Activate **OK**
17. Confirm both requested items have been added
18. Activate **Assignments** to read [Accessibility 101 Assignments](#)
19. Activate **Students** to read [Accessibility 101 Students](#)
20. Activate **Get Started** to return to [Accessibility 101 course home](#) and confirm step 2 is now checked off
21. Navigate to and activate **Settings** (within the left hand navigation) to open and read [Accessibility 101 Settings General](#)
22. Activate **Access** (within the Settings tab list) to open and read [Accessibility 101 Settings Access](#)
23. Activate **Grouping** (within the Settings tab list) to open and read [Accessibility 101 Settings Grouping](#)
24. Activate **Scoring** (within the Settings tab list) to open and read [Accessibility 101 Settings Scoring](#)
25. Activate **Advanced** (within the Settings tab list) to open and read [Accessibility 101 Settings Advanced](#)

S4: Course Readings (TOC, Search, Bookmark, Read aloud)

Scenario starts just as Scenario 3 ends. Assumes an account, and course has been created with sample reading material added. If a Tour is offered, we will decide for now and review in detail in S7.

1. If not already on [Accessibility 101 course home](#), open [Perusall login page](#) and login with A11y@EgaulEntry.com / A11yTesting! then navigate to Course home for course Accessibility 101
2. Navigate to and activate **Freedom Summer: A Brief History with Documents, First Edition** (within the left hand navigation) to open [A11yTesting | Freedom Summer: A Brief History with Documents, First Edition](#)
3. Navigate to and activate **Print**
4. Use the dropdown to select *The Atlantic City Challenge* then cancel
5. Navigate to and activate **All comments** and read the options
6. Navigate to and activate **All conversations** in the right-hand navigation
7. Navigate to and activate **Table of contents** in the right-hand navigation, and use it to navigate to **3. State of Mississippi, Voter Registration Form, 1950s
8. Close the Table of Contents
9. Navigate to and activate **Zoom** adjust the text and page size
10. Navigate to and activate **Read aloud**
11. Navigate to **Read-aloud language** and select *English*
12. Activate **Start speaking at current text position**
13. Adjust the read-aloud speed to be **2x**
14. Activate **pause**, then **Close**
15. Navigate to and activate **Appl Phys A-Mater 2009 Tull 2** (within the left hand navigation) to open [A11yTesting | Appl Phys A-Mater 2009 Tull 2](#)
16. Navigate to and activate **Zoom** adjust the text and page size
17. Navigate to **Page** and enter: 3
18. Navigate to and activate **Search** within the righthand navigation
19. Navigate to **Search** and enter: Accessibility
20. Read warning about no search results found
21. Navigate to **Search** and enter: diffusion
22. Read search results and activate Page 6
23. Navigate to and activate **Bookmark** within the righthand navigation
24. Activate **Bookmark this spot** - to open **Bookmark this spot** dialog
25. Navigate to **Bookmark name** and enter: Testing
26. Activate **Save changes**
27. Delete the bookmark you just created
28. Read confirmation and activate **OK**
29. Navigate to and activate **Graph a Linear Equation - MUSIC VIDEO** (within the left hand navigation) to open [A11yTesting | Graph a Linear Equation - MUSIC VIDEO](#)

30. **Play** video
31. Pause the video, evaluate options available, and restart the video
32. Turn on Captions, and read the captions for accuracy
33. Turn Captions off, re-watch the video for any visual information that isn't provided via audio
34. Adjust the volume, independent of the system volume
35. Adjust the speed of the video
36. Activate **Watch from YouTube.com**, which will open [YouTube - Graph a Linear Equation - MUSIC VIDEO](#)

S5: Instructor Homepage

Focus is on general navigation of this page, **Enroll in course** and **Copy course**

Similar to S2: Course Creation (Instructor) for students to access directly at Perusall.com, here **Create Course** controls are within a dialog.

1. Open [Perusall login page](#) and login with [A11y@EqaulEntry.com](#) / A11yTesting!
2. Navigate and activate **Enroll in course**, to open the **Enroll in course** dialog
3. Navigate to **Course code** and enter: TESTER-KVQ3Z
4. Activate **Save changes**
5. Navigate and activate **My Courses** to return to [Perusall account homepage](#)
6. Navigate to and read **My courses**
7. Navigate to **Sort** and select **Sort by date, newest first**
8. Navigate to and activate **Copy course**, to open the **Copy course** dialog
9. Navigate to **Copy from** and select *Another instructor's course, using a copy code*
10. Navigate to **Copy code** and enter: C4Y5VV8RT6
11. Navigate to **New course name** and enter: CopyCat
12. Activate **Select none** under **Content to copy**
13. Check **Adjust all deadlines so first assignment is due at**
14. Navigate to **First assignment due date** and select 3 weeks from today at 1 am
15. Activate **Save changes**
16. Navigate to and activate **Copy course**, to open the **Copy course** dialog
17. Navigate to **Copy from** and select *One of my courses*
18. Navigate to **Course to copy** and select *CopyCat*
19. Activate **Cancel**
20. Navigate to and activate **Create course**, to open the **Create course** dialog
21. Navigate to **I want to create a course...** and select *integrated with my institution's Learning Management System.*
22. Read the notification, then activate **Cancel**
23. Navigate to and activate **A11yTesting** which will open [A11yTesting course homepage](#)
24. Navigate to and activate **Unenroll from course**

25. Read the notification, and activate **OK** to return to [Perusall account homepage](#)
26. Navigate to and activate **CopyCat** which will open [CopyCat course homepage](#)
27. Navigate to and activate **Settings**
28. Activate **Delete course**
29. Read the notification, and activate **OK**

S6: Edit Profile / Change Password / Purchases / Terms of Service and Privacy Policy

1. Open [Perusall login page](#) and login with A11y@EqaulEntry.com / A11yTesting!
2. Navigate to and activate **Account Menu**
3. Activate **Edit Profile** to open the Edit Profile dialog
4. Navigate to **Time zone** and select *(GMT -07:00) US/Pacific*
5. Navigate to **Color scheme** and select *Automatically match system*
6. Select **Use Open Dyslexic Font for reading when possible**
7. Activate **OK** to close the Edit profile dialog
8. Navigate to and activate **Account Menu | Security checkup** to open the Security Checkup dialog
9. Read the dialog then activate **Change password** to open the Change password dialog
10. Navigate to **Current password** and enter: NOTgoing2work
11. Navigate to **Enter new password** and enter: NOTgoing2work
12. Navigate to **Re-enter new password** and enter: NOT
13. Activate **OK** knowing it will error
14. Read error message then return to all 3 password edits and enter: A11yTesting!
15. Activate **OK** knowing it will succeed
16. Read the confirmation, then navigate to and activate **Account Menu | My purchases** to open the My purchases dialog
17. Read the dialog then close
18. Navigate to and activate **Account Menu | Terms of Service** to open [FAQ and Terms of Service](#)
19. Read the Frequently Asked Questions, Terms of Service, Use of the Service, Rules, Your License to Perusall, Perusall's License to You, FERPA, Proprietary Rights, DMCA Notice, Third-Party Links, Open Source Licenses, Disclaimers and Indemnity, General.
20. Navigate to and activate **Account Menu | Privacy Policy** to open [Privacy Policy](#)
21. Read when the document was last updated, the intro, The Information We Collect (including its sub sections; Information You Provide to Us, Information We Collect from Others, Information We Collect Automatically), How We Use Information Collected, ... down to How to Contact Us

S7: Tour and in course help (powered by zendesk)

Scenario is focused on the Help system within the application, when the user is directed to Support.Perusall.com we have reached the boundary of this scenario, however issues specific to the inapplication help system are often mitigated by using the full help website. Support.Perusall has a unique account system and UI.

1. Open [Perusall login page](#) and login with A11y@EqaulEntry.com / A11yTesting!
2. Navigate to and activate **Help**
3. Navigate to **Search** and enter: Accessibility
4. Activate **Accessibility statement**
5. Read Perusall's accessibility statement
6. Navigate to and activate **Contact Us**
7. Confirm **Your name** and **Email address**
8. Navigate to **Issue type** and select *General question*
9. Navigate to **How can we help you?** and enter: testing
10. Activate **Send**
11. Read confirmation message and close Help
12. Navigate to and activate **Account Menu | Restart tour**
13. Navigate to and activate course **** [Accessibility 101 course home](#) ****
14. Navigate through all 15 steps of the tour
15. Navigate to and activate **Freedom Summer: A Brief History with Documents, First Edition** (within the left hand navigation) to open [A11yTesting | Freedom Summer: A Brief History with Documents, First Edition](#)
16. Navigate through all 7 steps of the tour

Appendix B:

Additional information about the evaluation methods used.

app.perusall Technologies

The technologies that this content "relies upon" are:

- HTML5
- CSS
- JavaScript
- jQuery
- Node.js
- Meteor
- PDF.js
- Bootstrap
- Handlebars
- MongoDB
- Moment.js
- Stripe
- Google Analytics
- Font Awesome

- Nginx

User Agents and Assistive Technologies

The technology platforms used in the verification:

Windows 10/Chrome

The assistive technologies used in the verification:

- Keyboard
- Colour Contrast Analyser
- Web Developer Toolbar
- NVDA
- Narrator
- aXe
- Code Inspection / Dev Tools
- Accessibility Insights for Web
- ANDI