**Test Report**

**for https://tvolearn.com/**

**V1.0**

# Revision History

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| --- | --- | --- |
| **Version** | **Date** | **Created By** |
| V1.0 | 2024-5-20 | Xiaomin Guo |

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# Test Scenario

1. Visit https://tvolearn.com/.

2. Navigate to the "Learning Resources (K-12)" dropdown from the header.

3. Choose a Grade level between 1 and 12.

4. Scroll down to the "Learn Forward in the Curriculum" section.

5. Click on any card within that section (representing subjects).

6. Develop tests to validate the functionality of this page.

Note:

For Grade levels 9-12, the 'Learn Forward in the Curriculum' section does not appear on the page. Therefore, we will select a Grade level between 1 and 8 instead of between 1 and 12.

# Test Assumptions

1. The website is assumed to be stable and accessible during test execution.

2. The layout and structure of the pages do not change frequently.

3. The content on the pages (text, images, links) is assumed to be correct and up to date.

4. The website is designed to be responsive and should render correctly on different screen sizes.

# Test Approach

1. Objective

To verify the functionality and responsiveness of the page of any subject card for any grade level between 1-8 using test automation.

2. Automated Testing Tools

Cypress/JavaScript

3. Test Case Design

To create specific test cases that cover key functionality, edge cases, and user scenarios.

4. Automated Testing Script

To generate random numbers to choose any grade level between 1-8 and any subject card for this grade level to meet the requirement.

# Test Cases

**1. For 720p resolution:**

Test case 1. Verify Content Sections

|  |  |
| --- | --- |
| Description | Verify that the page loads correctly with main content sections visible. |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Main content sections should be visible:   * The 'How to Use These Resources' section. * The 'Curriculum Overview' section. * The 'Resources for Learning' section. * The ‘Apply the Learning' section. * The 'Vocabulary' section. * The ‘Looking for a Different Subject?' section. * The ‘Learning Activities’ section. |

Test case 2. Verify Link Functionality within the Page

|  |  |
| --- | --- |
| Description | Verify that the correct pages are navigated to when links are clicked. |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Click all links one by one within the page.  7. Check http 200 OK success status. |

Test case 3. Verify Navigation to Subsections within the Page

|  |  |
| --- | --- |
| Description | Verify that the correct sections are scrolled to when internal navigation links are clicked |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Click internal links one by one under “On this page”.  7. The page scrolls to the correct sections |
| Page |  |

Test case 4. Verify Search Functionality

|  |  |
| --- | --- |
| Description | Verify that the search functionality returns correct results. |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Perform a search using the top search bar.  7. Verify the search results contain the correct information |

Test case 5. Verify Card Functionality of the 'Looking for a Different Subject' section

|  |  |
| --- | --- |
| Description | Verify navigation to the correct different subject page when a card is clicked. |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Click any card under “'Looking for a Different Subject”.  7. Verify new page is a different subject page with previous page |

Test case 6. Verify Subscription Functionality

|  |  |
| --- | --- |
| Description | Verify subscription functionality with a valid email address |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Enter a valid email address in the subscription form.  7. Verify the subscription success message is displayed. |
| Page |  |

Test case 7. Verify Subscription Functionality with Invalid Email Address

|  |  |
| --- | --- |
| Description | Verify that subscription with an invalid email address is handled correctly. |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Enter an invalid email address in the subscription form.  7. Verify the error message is displayed. |

**2. For iphone-6 resolution:**

Test case 8. Verify Back-to-Top Arrow

|  |  |
| --- | --- |
| Description | Verify that back-to-top arrow shows up when scrolling down, and the page scrolls back to the top when it is clicked |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Scroll down the page.  7. Back-to-Top Arrow is displayed.  8. Click the arrow.  9. The page scrolls back to the top. |

Test case 9. Verify Clickability of the "Learning Activities" section

|  |  |
| --- | --- |
| Description | Verify that the "Learning Activities" section can’t be clicked |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Verify the clickable subsections for desktop and tablet device in the "Learning Activities" section are not visible.  7. Verify there are not any clickable ‘a’ links in the "Learning Activities" section. |

Test case 10. Verify Navigation Menu

|  |  |
| --- | --- |
| Description | Verify navigation menu should be displayed correctly |
| Steps | 1. Visit https://tvolearn.com/.  2. Navigate to the "Learning Resources (K-12)" dropdown from the header.  3. Choose a Grade level between 1 and 8.  4. Scroll down to the "Learn Forward in the Curriculum" section.  5. Click on any card within that section.  6. Verify the navigation menus for desktop and tablet device are not visible.  7. Click the "hamburger menu" icon located at the top right corner of the page  8. Verify the navigation menu for mobile devices are visible. |

# Test Execution Results

|  |  |  |
| --- | --- | --- |
| **Case No.** | **Result** | **Description** |
| 1 | Pass |  |
| 2 | Fail | For some Grade level like Grade 2 and Grade 4, there are invalid links for 404 status received on clicking. |
| 3 | Pass |  |
| 4 | Pass |  |
| 5 | Pass |  |
| 6 | Pass |  |
| 7 | Pass |  |
| 8 | Pass |  |
| 9 | Pass |  |
| 10 | Pass |  |

# Test Summary

1. Test Approach

Automated tests are developed using Cypress/JavaScript to verify key functionalities of the TVO Learn website. Combination of navigation, interaction, and assertion commands are utilized to simulate user behavior and verify expected outcomes.

2. Test Cases Covered

* Navigation to "Learning Resources (K-12)" dropdown and selecting a Grade level.
* Verification of content sections display.
* Testing link functionality within the page.
* Verification of Internal navigation to subsections within the same page.
* Search functionality testing.
* Subscription feature testing.
* Responsive design testing for desktop and mobile views.
* Error handling for invalid email submissions.

3. Execution Results

Almost all test cases passed successfully, confirming the correct functioning of the TVO Learn website's key features. Navigation, content display, link functionality, internal navigation, search, subscription, responsive design, and error handling were all verified.

Only test case 2 about link functionality would fail for some grade level. For example, on the page of https://tvolearn.com/pages/grade-2-social-studies, in the “Resources for Learning” section, some links, like “The Canada Crew | Festivals”, are verified invalid due to 404 status response, i.e. the corresponding destination pages do not exist, and the links need be updated.