CILS

BC College and
Institute Library Services

Located at Langara College
Vancouver, British Columbia
www.langara.bc.ca/cils/

Accessibility of British Columbia's Post Secondary Library Web Sites, Catalogues and Databases: A Preliminary Report

Prepared by Stephen Blaeser
Michelle Creedy
MaryAnne Epp

Accessibility of British Columbia's Post Secondary Library Web Sites, Catalogues and Databases: A Preliminary Report

Table of Contents

Forward

Forward by Michelle Creedy (CILS Researcher)

It has often been said that the advent of Internet and adaptive technology greatly levels the playing field for the blind. According to many, students who are blind are now able to access most of the same resources as their sighted peers and all that is needed is an adapted computer. While the computer and the Internet have opened many doors for the student with vision loss, there are still many barriers the student must overcome when using the Internet with adaptive technology.

When testing the library Web Sites I used a computer with a program called JAWS which enables me to hear the information presented on the screen. Using JAWS, I access the Internet, check email, and use programs such as Microsoft Word. The computer then gives me feedback about what I am typing and what is appearing on the screen by means of a synthesized voice.

I have found that when doing papers, a Web Site that is not accessible can slow me down to the extent that I have sometimes resorted to hiring a sighted research assistant. Many journals are so cluttered that it takes me a great deal of time just to read through everything to sift out the one or two links I need. This cuts into valuable research time and I have been known to start working on papers as soon as the professor gives me the outline just to get it done in time. Most of my time is spent reading through sites to learn what they contain.

I also find that much of my research time is spent pressing the tab key! Tabbing is how I access links and many of the pages I tested are full of links and it takes time to tab through all of them to find the ones I am looking for. This is not so bad if links are labelled with appropriate labels instead of abbreviations or graphics. I find it quite challenging to listen to some of the lengthy labels people give to their links. It seems as if they want to give me all the information I need without asking me to click on the link to find it.

Before I started this project I never realized how much information on the Internet is actually in PDF form. This seems to be the latest and greatest way to put documents on the net. The only trouble is that PDF files are rather difficult to access when using a screen reader such as JAWS. Some sites provide the information in another format such as MS Word or Text, which is a great help for those using screen readers.

The project has been extremely interesting. I have learned a great deal about Web Site accessibility and web standards or the lack thereof. I am learning a great deal about adaptive technology and how it works with the various mainstream programs. I hope that this research continues so that people with disabilities can have the same access to mainstream services as their peers.

Analysis Process

Introduction: In 2004, BC College and Institute Library Services (CILS) initiated two research projects. The first was a study to determine the perceptions of librarians regarding the accessibility of their library catalogues, Library Web Sites and databases. The second was a study by a blind researcher who actually tested the library catalogues, some of the Library Web Sites and online databases. The researcher examined 17 post secondary library Web Sites, catalogues and databases using a screen reader in order to determine the accessibility or inaccessibility of resources available to blind users in a post secondary environment in British Columbia. The examination is by no means exhaustive and should not be considered authoritative. The intent of the examination was to identify Web access problems faced by a visually impaired user and break down the results and, if able, present recommendations. The Web resources were sampled in a random fashion. Due to the nature of access at some colleges the researcher was not able to gain access to all resources in a consistent manner; especially in the case of online databases. Furthermore, since the researcher recorded only those resources that proved problematic some colleges appear to have more data attributed to them. The databases in common to most colleges, however, had the same attributes and were therefore recorded as their own entities. The only problem that may have affected access on the college level would be how a particular college implemented access to database resources. For example, access may have been limited to on-site access or access via a proxy server. In these cases the research did not have access or limited access.

Accessibility Guidelines and Issues Template

In order to consistently track access issues CILS used the Accessibility Guidelines and Issues Template (*See* Appendix 1). This template is a mixture of the RNIB checklist[1] and the WAI guidelines[2]. The guideline/issue checklist allowed the researcher to assign a particular guideline consistently to those resources that had a particular access issue associated with it. The guidelines/checklist can also be used by institutions to check and consequently improve their online resources in a consistent manner. Please note that we did not evaluate Web Resources for usability although we realize that usability is an extremely important aspect of accessibility and as such have commented upon it in some areas of our data section.

Data

The data collected from the various resources was entered into our data collection template in the following manner:

- Institution (i.e., A),
- Name of Web Resource (i.e., Study Guide),
- Type of Web Resource (Web, Catalogue, Database),
- Guideline Number (according to the Accessibility Guidelines and Issues Template),

---

[1] RNIB See it Right checklist,
<http://www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public_checklists.hcsp#P9_858>
[2] Web Content Accessibility Guidelines 1.0, <http://www.w3.org/TR/WAI-WEBCONTENT/>.

- Issue (according to the Accessibility Guidelines and Issues Template; issues can number more than 1 for each guideline number),
- Comment (additional information provided by the researcher).

The results are broken down and summarized on the following page and illuminate the common problems encountered on the average library Web Site in British Columbia. Furthermore, this data can be used to re-examine individual Web Sites in order to improve access and service to those students that are print disabled. Keep in mind, however, that this type of evaluation is an ongoing process and should be built into any systematic review, update or change to a library's expanding Web universe.
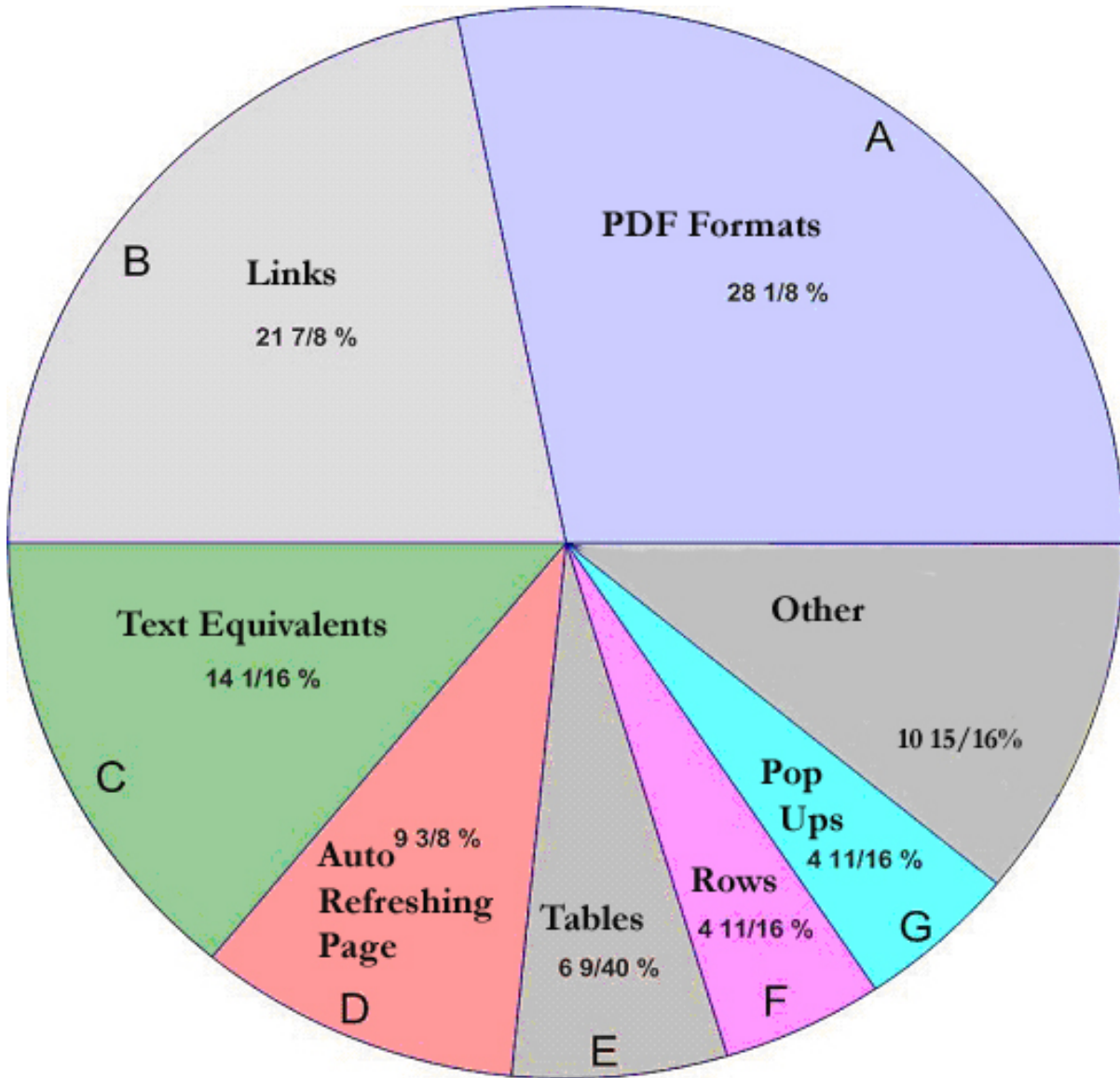
Data Summary

The following data is a summary listing of the most common problems encountered in the examination of Web Sites and Resources. Each problem is associated with a percentage of the time that the researcher encountered this problem in relation to the other problems. With this summary we can predict the most common type of problem that may be encountered on a Web Site and endeavour to correct them or prevent them.

1. When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site: **28.125 %**
2. Clearly identify the target of each link: **21.875 %**.
3. Provide a text equivalent for every non-text element: **14.0625 %**.
4. Do not create periodically auto-refreshing pages: **9.375 %**.
5. If a table is used for layout, do not use any structural mark-up for the purpose of visual formatting: **6.225 %**.
6. For data tables, identify row and column headers: **4.6875 %**.
7. Do not cause pop-ups or other windows to appear, and do not change the current window, without informing the user: **4.6875 %**.
8. Create a logical tab order through links, form controls, and objects: **3.125 %**.
9. For all form controls with implicitly associated labels, ensure that the label is properly positioned: **3.125 %**.
10. If frames are used, provide meaningful, useful NOFRAMES content: **1.56 %**.
11. Do not use tables for layout unless the table makes sense when linearized: **1.56 %**.
12. Give each page a unique TITLE to aid users in orienting themselves within the site: **1.56 %**.

Breakdown of Results by Percentage

The following pie chart is a representation of the Data Summary on the previous page.

PDF Formats
28 1/8 %
A

Links
21 7/8 %
B

Text Equivalents
14 1/16 %
C

Other
10 15/16%

Auto
Refreshing
Page
9 3/8 %
D

Tables
6 9/40 %
E

Rows
4 11/16 %
F

Pop
Ups
4 11/16 %
G

General Issues

This section contains a summary of some of the most common access issues found on the Web Sites and databases that were tested.

Web Site Issues

The following are general issues and recommendations for both library Web Sites and databases containing journals.

1. PDF documents are not available in an accessible format and the individual using a screen reader has no way of accessing the information that is provided in the PDF document.

2. Combo boxes are not accessible to a JAWS user, which limits what the user can actually access on the site. It is not possible to arrow through the options and make a choice of what to click on.

3. Macromedia Flash is used which is not accessible to someone using a screen reader. The user is thus limited to what they can access on the site.

4. Pages automatically refresh which makes reading a page very difficult for someone using JAWS. They cannot always get through the relevant text on a page before it refreshes. This is especially an issue for someone who uses a braille display or who uses speech that reads slowly.

5. Many links are labelled as "Click Here" which is confusing to someone who is tabbing through the information. The question they will ask themselves is "Click here for what?" They will then have to retrace their steps and read the body of the site to learn what it is they are clicking on.

6. Links are often labelled with ambiguous labels such as graphics, which cannot be interpreted by a screen reader. The person has no idea what the graphic stands for because they cannot see it.

7. Links sometimes have lengthy labels, which take a great deal of time to listen to. When someone is using JAWS, they like to be able to tab through a document and learn what the links are in a short space of time. Information is missed if the links are too long because the user may not have the patience to sit and listen to the entire "alt" tag.

8. Labels of links can have inappropriate labels such as colours, which mean nothing to the user. A link should tell the user what they would find if they click on the link.

9. Data tables can be confusing to the person using JAWS. The table should always be readable if it is created in a linear manner. Headings should be provided at each column and row to help navigation. Use linear text wherever possible.

10. Different pages should not share the same title.

Database Issues

The following are issues that were found specifically dealing with databases. The databases that were examined in this study were primarily databases made available through colleges in British Columbia. Due to time and resource considerations an exhaustive examination was not carried out. Nevertheless, it is recommended that the examination of databases should be an ongoing process and be carried out in a systematic manner as a part of any review process.

1. Abbreviations are used to refer to journals. This can be confusing to a JAWS user depending on whether or not they know what the acronym stands for.

2. Form controls should be properly labelled so that JAWS users know what part of the form they are filling out.

3. Users often have to do a lot of tabbing on the database sites to find what they are looking for. This is extremely time-consuming for the user and it causes a great deal of confusion for the user. Avoid making the sites cluttered so that there is not too much for the person to read through. This is especially true for search sites. It should be easy for the user to find the links they need to conduct the search quickly and efficiently.

4. Links should not open in a new browser window without warning the user.

5. Text-only links should be found at the beginning of the page not at the end. This allows the user to click on the accessible site right away. It avoids having to sift through a lot of clutter and makes the initial search easy to perform.

6. The order of links on a page should be in a logical order so that the user can more or less anticipate what might be coming next.

7. Avoid over-use of graphics. If graphics are used, label them with appropriate labels.

To review an extensive list of issues associated with the accessibility of online database in an American context please visit the study carried out by the Oregon State University Technology Access Program. The study titled "Accessibility of Online Databases: A Usability Study of Research Databases" is available through the Technology Access Program Web Site reachable at <http://tap.oregonstate.edu/research/ahg.htm>.

Appendix 1: Accessibility Guidelines and Issues Template

Guidelines	Issues	Status Comment
1. Provide a text equivalent for every non-text element.	Inappropriate alt text for images related to content	
	Missing alt attribute on images related to content	
	Inappropriate alt text for decorative images	
	Missing alt text for decorative images	
	Inappropriate alt text for images links	
	Missing alt attribute for images links	
	Inappropriate alt text for images of text	
	Missing alt text for images of text	
	Inappropriate alt text for layout images e.g. window dressing and spacer images	
	Missing alt attribute for layout images e.g. window dressing and spacer images	
	Inappropriate alt text for structural images	
	Missing alt attribute for structural images	
	Inappropriate alt text for buttons	
	Missing alt attribute for buttons	
	Inappropriate alt text for icons	
	Missing alt attribute for icons	
	No alt text should be more than a short phrase of 10 words	
	Inappropriate alt text for complex images e.g. graphs and charts	
	Missing alt attribute for complex images e.g. graphs and charts	
	Inappropriate alt text for image maps and hot spots	
	Missing alt attribute for image maps and hot spots	
	Provide alt text for applets, objects and Flash	
	Missing alt attributes for applets and Flash animations	
	Provide alternative content for applets and objects	
2. If frames are used, provide meaningful, useful NOFRAMES content.	Inappropriate NOFRAMES content	
	Missing NOFRAMES content	
	Inappropriate alternative content for IFRAME	
	Missing alternative content for IFRAME	

Guidelines	Issues	Status Comment
3. Provide redundant text links for each active region of an image map	Inappropriate alt text for the image map Missing alt attribute for the image map Inappropriate alt text for image map hotspots Missing alt attribute for image map hotspots Missing alternative text links for image map hotspots elsewhere on the page	
4. [Multimedia] Provide an auditory description of the important information of description of the important information of the visual track of a multimedia presentation	Inappropriate auditory description for important information in video tracks Missing auditory description for important information in video tracks	
5. [Multimedia] Synchronize equivalent alternatives (e.g. captions or auditory descriptions of the visual track) with the presentation.	Ensure audio descriptions and captions are synchronised with the video presentation	
6. Ensure that all information conveyed with colour is also available without colour.	Avoid colour alone to identify information	
7. Ensure that foreground and background colour combinations provide sufficient contrast (particularly for images).	Insufficient contrast between text and background Insufficient contrast for images Only one of the text and background colours is defined Text and background colours definitions are split between CSS and HTML formatting	
8. Use text for link text rather than a graphic, or provide the same link text format on the same page.	Provide alternative text links elsewhere on the page	

Guidelines	Issues	Status Comment
9. Use relative rather than absolute units in mark-up language attribute values and style sheet property values and ensure that the information can still be accessed if the user changes the font size.	The FONT size attribute contains unsigned values Absolute units have been used to define text Text became unreadable when viewed at the 'smallest' browser text setting Table format doesn't cope with other elements being resized Using CSS properties to define the area on screen within which a particular DIV can be displayed Using absolute values in CSS properties to define the position of elements on the page	
10. Use header elements to convey document structure.	Headings are identified solely through visual presentation Inappropriate heading levels have been assigned Avoid skipping heading levels Avoid using graphics of text for headings	
11. Clearly identify changes in the natural language of a document's text and any text equivalents.	Identify changes in language within a page Identify changes in language for alt text Identify changes in language for alternative content i.e. for applets or objects	
12. For data tables, identify row and column headers.	Simple data-table headings have not been identified using TH mark-up Complex data-table headings have not been adequately identified in mark-up	
13. Do not use tables for layout unless the table makes sense when linearized.	Content is presented in an illogical sequence when the underlying table structure is removed	

Guidelines	Issues	Status Comment
14. If a table is used for layout, do not use any structural mark-up for the purpose of visual formatting.	Table headers (TH) have been used for visual presentation Captions have been used to provide captions for images contained within tables Captions have been used to provide a line of text Summary attribute contains excessive text	
15. Organize documents so they may be read without style sheets and ensure that information can still be accessed if the user changes the text and background colours.	Images lose definition when style sheets are removed Content is presented in an illogical sequence when the style sheet is removed	
16. Ensure that equivalents for dynamic content are updated when the dynamic content changes.	Alternative content fails to update when dynamic content updates Frame source is not an HTML file	
17. Ensure that pages are usable when scripts, applets, or other programmatic objects are turned off or not supported [amongst other things, that means not relying on JavaScript].	Links relied on JavaScript alone Forms relied on JavaScript alone to validate Forms relied on JavaScript alone to submit information JavaScript is used to dynamically change content Menus rely on JavaScript JavaScript is used to position the cursor in form fields Content disappears when JavaScript is disabled Content presented using JavaScript	
18. When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site	No links to Access Adobe were provided (requirement) Make PDFs as accessible as possible (recommendations)	

Guidelines	Issues	Status Comment
19. Avoid causing the screen to flicker.	Screen was found to flicker	
20. Until user agents allow users to control blinking, avoid causing content to blink.	Animated images do not come to a standstill The speed of animated images is too fast Pages contained too many animated images Avoid the use of blinking text	
21. Do not create periodically auto-refreshing pages.	Pages were found that were set to automatically refresh Pages were found that were set to automatically redirect Insufficient warning to pages that timeout	
22. Provide client-side image maps instead of server-side image maps.	Server-side image maps were found in the site	
23. Create a logical tab order through links, form controls, and objects.	The order of links was found to be illogical on a page Forms labels and controls laid-out using tables become separated when layout tables are linearized	
24. Do not cause pop-ups or other windows to appear, and do not change the current window, without informing the user.	Links open in a new browser window and/or pop-up without the user being informed Links to external open in a new 'pop-up' window	
25. For all form controls with implicitly associated labels, ensure that the label is properly positioned.	Form controls were found that lacked implicit form labels Form controls were found that had incorrectly positioned implicit form labels Form controls were found that had inadequate form labels Forms were found to have inadequate instructions Forms were found to have large areas of white space	

Guidelines	Issues	Status Comment
26. If frames are use give each frame a meaningful NAME and TITLE to facilitate frame identification and navigation [See also 1.1].	Frame elements lack NAME and TITLE attributes Frame elements had inadequate NAME and TITLE attributes IFrame elements lack NAME and TITLE attributes IFrames elements had inadequate NAME and TITLE attributes	
27. Clearly identify the target of each link.	Dates and numbers used inappropriately as link text Uncommon jargon and acronyms used as link text Generic link text found (more, further information, click here and here) Identical link text is used on one page to link to two or more different documents Link text was found to be inconsistent Inadequate link text used	
28. Give each page a unique TITLE to aid users in orienting themselves within the site.	Pages found with no TITLE attribute Pages found sharing the same TITLE attribute	

Appendix 2: Sampled Data Accessibility Data Key

The data gathered in this study was randomly sampled from colleges in British Columbia and has been broken down in the following manner:
- Institution (i.e., A)
- Name of Web Resource (i.e., Study Guide)
- Type of Web Resource (Web, Catalogue, Database)
- Guideline Number (According to the Accessibility Guidelines and Issues Template)
- Issue (According to the Accessibility Guidelines and Issues Template; issues can number more than 1 for each guideline number)
- Comment (Additional information provided by the researcher).

In	Name	T	G	Issue	Comment
A	College Home Page	W			The link for the library should be on the homepage instead of under campus services page. It would be easier to find.
A	Research Guides	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site. User does not know which links are PDF.	
B	Web Catalogue	C	1	No alt text should be more than a short phrase of 10 words.	Some of the links on Webcat are labelled as colours. The actual label for the link sometimes appears after the colour. It would be preferable to take the colour label out and just leave the label that is relevant to the link.
B	Web Page	W	12	For data tables, identify row and column headers.	
B	Web Page	C	12	For data tables, identify row and column headings.	Links should not be labelled with just a "more" label. Label them with clear labels.
B	Copyright Page	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site.	
C	Web Page	C	21	Results are hard to interpret. Combo boxes don't work. 21. Do not create periodically auto-refreshing pages.	
C	Library Floor Plan	W		There could be descriptions of the library instead of just having pictures of the floor plan.	

In	Name	T	G	Issue	Comment
D	College Homepage	W	1	Missing alt attribute on images related to content.	
D	Library Home Page	W			The combo box on this page does not let one arrow through the options.
D	Web Catalogue	C	21	Pages were found that were set to automatically refresh.	
D	Web Catalogue	C	27	Jargon and acronyms used as link text.	
D	Web Catalogue	C	13	Content is presented in an illogical sequence when the underlying table structure is removed.	
E	Library Home Page	W	1	Inappropriate alt text for images related to content.	
E	Web Page	W			Makes reference to a "Grey Bar" when talking about renewing books and checking for fines. Users should be able to hear a word such as "overdue" or something that relates to what they need to know about the list of books on the screen.
E	Style Guides	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site.	
E	Fact Guide	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site.	
E	Web Catalogue	C			Make sure that combo boxes throughout these sites are working especially on the results pages of the online catalogue.
F	Home Page	W	1	Missing alt attributes for applets and Flash animations, Missing alt attribute for buttons.	
F	Database	D			This site is not labelled appropriately and I am unable to make sense of it.
F	Web Page	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access.	
G	Web Catalogue	C	27	Clearly identify the target of each link. Jargon and acronyms used as link text.	
G	Web Catalogue	C	21.	Do not create periodically auto-refreshing pages. Insufficient warning to pages that timeout.	

In	Name	T	G	Issue	Comment
G	Bibliographies	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access.	
H	Web Page	W			The link labelled "Click on Library Catalogue" (Should list the Web Site for the catalogue.) Click on RESERVE DESK (navy blue box at top of screen). (Could say "The link labelled reserve desk" in addition to the information about the navy blue box.) Type in name of course in input box.
H	Web Catalogue	C	1	Inappropriate alt text for decorative images.	
H	Web Catalogue	C	21	Pages were found that were set to automatically refresh.	
H	Article Indexes and databases	D	25	Form controls were found that had inadequate form labels.	
H	Article Indexes and databases	D	1	No alt text should be more than a short phrase of 10 words.	
I	Library Home Page	W	27	Clearly identify the target for each link. Jargon and acronyms used as link text.	
I	Web Catalogue	C	27	Clearly identify the target of each link. Jargon and acronyms used as link text.	
I	Open Hours	W			The hours page needs to be restructured into a form that is easier for a JAWS user to navigate.
J	Web Catalogue	C	27	Clearly identify the target of each link. Uncommon jargon and acronyms used as link text.	
J	Web Catalogue	C	14	If a table is used for layout, do not use any structural mark-up for the purpose of visual formatting.	
K	Web Catalogue	C	27	Inadequate link text used.	
K	Web Catalogue	C	14	Table headings have been used for visual presentation.	
K	Web Catalogue	C	27	Uncommon jargon and acronyms used as link text .	
K	Faculty Resources	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access.	
K	Web Page	W	14	Table headings have been used for visual presentation.	

In	Name	T	G	Issue	Comment
L	College Home Page	W	27	Generic link text found (more, further information, click here and here).	
L	Library Home Page	W	1	Inappropriate alt text for images link.	
L	Web Page	W	14	Table headings have been used for visual presentation.	
L	Guides	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format.	
L	Web Catalogue	C	27	Uncommon jargon and acronyms used as link text.	
M	Library Home Page	W		Inappropriate alt text for images related to content.	This site was hard to find. I had to do a search to find it by typing the word "Library" in on the search function on the home page.
M	Web Catalogue	C	2	If frames are used, provide meaningful, useful NOFRAMES content. Inadequate link text used.	Links need to be relabelled but the view buttons and titles were easy to find.
M	Web Catalogue	C	27	Uncommon jargon and acronyms used as link text .	
N	Library Home Page	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format.	
N	Web Catalogue	C	27	Uncommon jargon and acronyms used as link text. Could be labelled with more of a description.	Also, once you click on the link, the individual edit fields are not labelled. The labels appear before both of the edit fields which can confuse people using jaws as they cannot tell which field you are in once forms mode is on.
N	About Us	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format.	
N	About Us	W			The layout should be changed to the library, the day and then the hours. The headings, at the moment, does not read easily.
N	Library Calendar	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format.	
N	Library Home Page	W	28	Pages found sharing the same title attribute	
O	College Home Page	W			The drop-down menus on this site are not accessible. There are many links labelled as graphic spacer which makes the site hard to read. The library Web Site is hard to find as it is linked to the student services Web Site.

In	Name	T	G	Issue	Comment
O	Library Home Page	W	27	Jargon and acronyms used as link text.	Home page has many graphic spacer links. This site is quite cluttered with lines and graphics.
O	Course Web Sites	W	18	When providing information in PDF format, provide the same information in an alternate, accessible format.	
O	Web Page	W			Once the user clicks on a link on this site, there should be an option to skip to the content of the page instead of having to down-arrow through all the links to get to the text. This should happen on all pages. The user should not have to arrow through all of the links to get to the information on this site.
O	Publications	W	18	When providing information in PDF format, provide the same information in an alternate, accessible format (e.g. HTML or text) and/or provide links to the Accessible Adobe Web Site.	
P	Library Home Page	W			This site can be found from the student services site. May want to put a link to library from the front page.
P	Web Catalogue	C			Have a library ID for the Online Databases and Periodical Indexes but the page keeps telling me it has timed out. This is hard with JAWS since JAWS users need more time to read things.
P	Web Page	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site.	
P	Library Forms	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the Access Adobe Web Site.	
P	Library Hours	W			Page is set up in a way that is very confusing for JAWS users. Have campus then days then hours. When the hours change, put the day first.
Q	Library Home Page	W	18	When providing information in PDF format, provide the same information in an alternative, accessible format. .	Clicking on Library news from this site brings up PDF documents with no warning.

In	Name	T	G	Issue	Comment
R	Library Home Page	W	27	Clearly identify the target of each link.	
R	Web Catalogue		21	Do not create auto-refreshing pages.	Edit fields need to be labelled more appropriately so that the user knows whether the word "keywords" is referring to author or title.

Databases Sampled

In	Name	T	G	Issue	Comment
EBSCO Host	Academic Search Elite		1	No alt text should be more than a short phrase of ten words.	Combo Boxes on results pages, The user has to do a lot of tabbing to get past links that are not relevant.
EBSCO Host	Academic Search Elite		25	Form controls were found that had incorrectly positioned implicit form labels. Form controls were found that had inadequate form labels.	
Ingenta	Reveal Research Alerts		23	Form controls were found that lacked implicit form labels.	Very cluttered
Ingenta	Reveal Research Alerts		1	No alt text should be more than a short phrase of 10 words.	
ProQuest			27	Inadequate link text used.	
ProQuest			24	Links open in a new browser window and/or pop-up without the user being informed.	Especially true for the combo boxes.
ProQuest			21	Insufficient warning to pages that timeout.	Text Only link should appear at the beginning of the page not at the end.
ProQuest			23	The order of links was found to be illogical on a page.	
Access Science			24	Links open in a new browser window and/or pop-up without the user being informed.	Especially true for the combo boxes.
BC Magazines and Newspapers					Unable to access. Won't read anything.
ACM Digital Library			24	Links open in a new browser window and/or pop-up without the user being informed.	Especially true for the combo boxes.
ACM Digital Library			18	No links to Access Adobe were provided.	
ERIC			18	When providing information in PDF format, provide the same information in an alternative, accessible format (e.g. HTML or text) and/or provide links to the accessible adobe Web Site.	Links were easy to read and well-labeled. The edit fields where the searcher must enter the year and month you want to start searching from should read from when you press enter. Sometimes results on ERIC are only in PDF