By Linda Amundson

Five Steps to an Accessible Classroom Website

If you were to evaluate your classroom website right now, would you be able to navigate it using text-to-speech software with your eyes closed? Would you be able to gather all of the information the website provides with the sound turned off? What if you viewed the website through a browser with images turned off? What if you could not use a mouse?

When teachers or technology coordinators publish a website, they are providing a product for a diverse group of people. That's why website design should follow accessibility guidelines. Websites should be accessible to those with visual, hearing, movement, cognitive, and speech disabilities. People may be using a variety of tools to experience and navigate your website, including voice output, Braille displays, keyboards instead of mice, and screen magnifiers. The effective use of these tools becomes possible only when a website is truly accessible.

In addition, when you follow accessibility guidelines, your website becomes navigable for those with slow Internet connections and people who have limited experience with the language you speak.

Good design means greater accessibility for all. Follow these five steps, and you will open your website to a wide community of diverse users.

Step 1: Organize for Easier Navigation

Make sure you use headers to structure your webpage. Headers identify new sections to the reader, whether visitors are skimming a website for information or using a screen reader.

Think of using headers as similar to creating an outline. Headers provide a hierarchy for your text and organize information into groups.

Graphic elements, such as horizontal lines, are not always clear signals for new sections, especially to someone who cannot see the screen. Go ahead and use horizontal lines and other graphical elements, but be sure to incorporate headers as well.

Use similar organization on all of the pages within your website to allow the user to become comfortable with the format you have chosen and to make navigating other pages easier. Also, do not create webpages that are too large for the screen and require horizontal scrolling. Keep in mind that your audience may use a variety of screen resolutions. Use relative sizing in percent format rather than a fixed pixel amount to allow visitors to view your website using browser windows of various sizes.

Finally, when organizing information on your website, think about the colors you are using for fonts and backgrounds. Avoid red and green, as these colors are indistinguishable to those with color blindness. Also, consider the contrast of the colors. Never use colors on the same page that are difficult to distinguish in gray scale.

Step 2: Navigation without a Mouse

Set up your website so that users can navigate easily through the information with the Tab key. This will be beneficial to a variety of people, including those with vision impairments or even someone with a temporary disability such as a broken arm.

WHAT MAKES THIS WEBSITE ACCESSIBLE?

The World Wide Web Consortium website (www.w3.org) follows all of the criteria listed in this article:

- Uses headers
- Doesn't require horizontal scrolling
- Uses appropriate color scheme for the background
- Can be viewed easily in gray scale
- Can be navigated with the Tab key; does not have dropdown menus
- Provides descriptive text for links
- Uses the access key tag to assign letters to main links
- Provides a description of the image at the top using the alt tag
- Uses alt tags of appropriate length
- Provides title tags on main links to give users descriptions
- Provides a link to contact the webpage developer

Keep in mind that tools such as rollovers and dropdown menus are difficult to use without a mouse. Because these features use Java script, most screen readers cannot interpret the information. Cascading style sheets (CSS) can improve the usability of the Java script, but incorporating them

WEB VALIDATION TOOLS

Cynthia Says: www.contentquality.com

into a website can be a complicated process for the Web developer.

One way to make links accessible to those without a mouse is to include the access key attribute in the link code. Access keys allow the developer to choose a letter key to press to go to a specific linked page. Each link can be coded with a different access key to allow the user to follow a variety of links without tabbing through each one each time. It is also helpful to group related links together.

Step 3: Text Explanations for Images

Provide text for every item in your website that is not in text format, such as images, audio, animation, buttons, Java applets, and image maps. Think about how you would describe them over the telephone. Provide enough information so that the user isn't left questioning what they are missing, but bear in mind that too much information can make viewing and navigating the website a daunting task. Screen readers cannot make sense of images and Java script, so be sure to provide explanations in text. Otherwise, users who cannot view the screen will skip nontext items.

One way to provide text information is to use the "alt" tag or "longdesc" tag within the image, animation, or applet HTML code. Some Web editors, such as PageSpinner for Mac, will ask for this information when inserting a new image. Use the alt tag for a very brief description of the item so the information is available when the image cannot be viewed. If you require a longer description, use the longdesc tag to provide a link to an additional file with

more information about the item. This is especially useful when describing a graph, chart, or detailed image.

Sound and video need text too. Always include captions in video, and provide transcripts of audio and video so the user can gather all of the necessary information.

Finally, if all of the additional text gets to be too much for one page, provide an additional page that is text only. Make sure to create a link between the two pages so the user can get back to the original page.

Step 4: Using Text that Makes Sense

When creating links, use text that actually describes what the link is about. Avoid phrases such as "click here," which doesn't tell users what information they will gather by clicking on a link and doesn't apply to those who aren't using a mouse. One way to include more information about the link is to use the "title" attribute. You can give the link a title within the link code and describe what the link does. Also, if the same link text is used multiple times on the same page, it should link to the same page each time.

Step 5: Web Validators

Web validators evaluate your website according to various categories of accessibility. After evaluating your website, a validator generates a report that lists any accessibility problems. Each Web validator assesses the website according to slightly different criteria, so you or your Web developer may consider using more than one. (See Web Validation Tools.)

WAVE: http://wave.webaim.org

Test Accesibilidad Web: www.tawdis.net/ingles.html?lang=en

Final Check

After planning your website using these five steps, it's time for a final check.

- Try using your website without a mouse. Can you navigate it now?
- Turn the sound off on your computer, change the settings in your Internet browser to turn off images, and resize the window.
- Check the website using a gray-scale color scheme.

If you can still gather all of the intended information, you have accomplished your goal of making the website more accessible. Another way to check website accessibility is to ask an individual with a disability to test your website to provide additional feedback. Also, be sure to include an e-mail address on your webpage.

It takes considerable thought to ensure that a webpage is accessible to a wide audience. Teachers as Web developers need to consider the purpose of their webpages, which is to provide information to the intended audience. By keeping these five steps in mind, your website will become much more effective and useful.

Resources

"Introduction to Web Accessibility" by WebAIM: http://webaim.org/intro
"Introduction to Web Accessibility" (2005) by World Wide Web Consortium: www.w3.org/WAI/intro/accessibility.php
PageSpinner: www.optima-system.com/pagespinner
"Quick Tips to Make Accessible Web Sites" (1999) by the Education and Outreach Working Group: www.w3.org/WAI/quicktips

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