Understanding Web Accessibility from the User’s Perspective

Michelle Cryan

Abstract

The Internet has opened doors for many people with disabilities. It brings the world to them in ways that were never before possible, from reading newspapers and magazines, to viewing artwork in a museum thousands of miles away, or joining a social network support group. Others have found empowerment by being able to express themselves through a blog or by sharing their artwork. The Internet has become a central component to leisure and life for people with disabilities, much like it is for most people. All the benefits of the Internet, however, cannot happen if the Web environment is not accessible. This article provides a user’s perspective on accessibility on the web.

Keywords: internet, web accessibility, simulation activities

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Understanding Web Accessibility from the User’s Perspective

In the hour or so since I woke up, I’ve taken more things for granted than I can count. I woke to the sound of my cat purring by my head, walked downstairs, ground the coffee beans and set the pot, and began typing on my computer at a respectable 45 words per minute. I didn’t need any assistance to accomplish these tasks; I didn’t even think about them. Up to 19% of Americans might not be able to say the same thing (U.S. Census Bureau, 2010).

The Internet has opened doors for many people with disabilities. It brings the world to them in ways that were never before possible, from reading newspapers and magazines, to viewing artwork in a museum thousands of miles away, or joining a social network support group. Others have found empowerment by being able to express themselves through a blog or by sharing their artwork. The Internet has become a central component to leisure and life for people with disabilities, much like it is for most people.

With all the benefits the Internet offers people with disabilities, it’s surprising that the Pew Internet reports, “Fifty-four percent of adults living with a disability use the internet, compared with 81% of adults who report none of the disabilities listed in the survey” (Pew Research Center, 2011).

Perhaps part of the reason less people with disabilities use the Internet is because there are still many challenges that stand in their way. Text can be inaccessible to a screen reader, a site’s navigation can be too complicated for someone with limited mobility, or a site’s color choices or language might make it impossible for someone to know what they should do.

Many of these roadblocks are easy to avoid. It starts with understanding the challenges that face these individuals and then designing accessible content.

My A-ha Moment

I have a son with a learning disability in written expression. When he was diagnosed, I couldn’t understand what he was going through. He couldn’t spell the simplest of words. At the time, I even equated spelling with intelligence. Studying for spelling tests in elementary school was a grueling process.

“NO! Spell it again.”
“You spelled it correctly two minutes ago, how did you forget?”

“Fifty-four percent of adults living with a disability use the internet, compared with 81% of adults who report none of the disabilities listed in the survey.”
What was going on? Was he not trying? Was he doing it to make me crazy? He could read and comprehend; he just couldn’t get the words to flow back the other way onto the paper.

About 10 years ago I stumbled on the Misunderstood Minds website and it completely changed how I viewed my son’s disability. I went through the site and tried each of the “Experience Firsthand” exercises. In the Writing section, I found the “Composition Activity” which asked you to write an essay, except some of the rules of spelling and grammar were changed. I read the new rules and began typing. About three words into the exercise, I gave up. “Forget this!” I thought. About a nanosecond later I realized, “Ohhhh, that’s what it’s like for him everyday.”

That newfound empathy completely changed my parenting. For millions of people around the world, navigating the Internet can be as frustrating as that Composition Activity. I want to share with you some easy techniques and tools that can help you understand what people with disabilities might experience when they view content online.

**Tips to Understanding**

Try the following activities for at least five minutes each. Hopefully, they will raise your awareness about the challenges people with disabilities face and give you the motivation to create content that is accessible to all or advocate for it if you are not in a design role.

<table>
<thead>
<tr>
<th>Disability</th>
<th>Try it</th>
<th>Resources</th>
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| **Motor** | • If you’re using a mouse, turn it 180 degrees so that the buttons are facing toward you and try navigating through a website, especially one with drop-down menus.  
• Try typing with a chopstick in your mouth. | • [Types of motor disabilities](#) |
| **Visual** | • **Blindness:** Install a screen reader on your computer. Then close your eyes or turn off your monitor and try reading and navigating a website. There are several choices for free screen readers, but if you’re using the Chrome browser, you can install the ChromeVox extension.  
• **Color Blindness:** To simulate color-blindness, view a website or upload an image using [Visicheck](#).  
Imagine you visited a website that said:  
*Select the Green button to win $100. Select the Red button to be audited by the IRS.*  
Below is an image I created with Visicheck to illustrate the different types of color blindness. | • [Chrome browser](#)  
• [ChromeVox](#)  
• [Visicheck](#)  
• [Types of low vision](#) |
Please note that “Click Here” is not accessible language and is used here for illustrative purposes only. Not all users “Click” links and more importantly, link text should describe where it will take the user.

<table>
<thead>
<tr>
<th>Visual (cont.)</th>
<th>Auditory</th>
</tr>
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<tbody>
<tr>
<td>• <strong>Low Vision</strong> (including macular degeneration, glaucoma, cataracts, and diabetic retinopathy): People with these conditions generally see with limited clarity. Try viewing pages through a paper towel roll. Does the site make sense with the limited context?</td>
<td>• Watch videos without your sound on. Can you understand what’s going on? Try viewing videos with and without captions.</td>
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<td></td>
<td>• Watch poorly/machine captioned videos with captions and sound on. It probably won’t take you long to find a spot where the audio and the captions are completely different.</td>
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<td></td>
<td>YouTube adds a disclaimer when you turn on captions that have been auto-generated. To be fair, it does a decent job, but it’s quite often way off the mark. In the screenshot below, the caption text should have read, “Miracles do happen everyday.” View the video.</td>
</tr>
</tbody>
</table>
Cognitive

- Read a scholarly article about a subject that is foreign to you. For me, this could be anything on say theoretical physics.
- Read a long document without any paragraphs or line breaks.
- Follow the written instructions for making an origami cup on WebAim and then try it with the visual instructions.

More about cognitive disabilities

More resources

The “From Where I Sit” videos from California State University are a great way to learn about the challenges these students face in the classroom and online.

Likewise, the Keeping Accessibility in Mind video from WebAIM can help you understand accessibility from the user’s perspective.

References
