Digital Accessibility

ODLS Quick Guide series

UMASS DONAHUE INSTITUTE
Organizational Development
& Learning Solutions

Note From ODLS

The Organizational Development and Learning Solutions team is pleased to offer you this quick guide volume on accessibility for learning. We created this series to address common topics for existing clients, future clients, and curious minds in general. In each volume, we briefly address some of the key concepts and concerns associated with the topic, offer guidance and best practices, and provide additional resources. We hope that the series inspires confidence and creativity in your present and future projects. If you are overwhelmed or uncertain about approaching your next project, we are here to support your learning project needs.

Digital accessibility has become a significant focus in our increasingly online, computerized world. Laws in the United States of America and beyond require adherence to accessibility standards for a growing number of organizations. What does that mean for your learning products? What measures should you take to ensure that you meet your learners' needs? In the following pages, we will begin to answer these questions.

–The ODLS Team

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WHAT DOES ACCESSIBILITY MEAN?

Accessibility is ensuring that environments, tools, services, and products are usable by most people, especially those with disabilities. Most of us will experience a form of disability at some point in our lives. Additionally, a significant number of people have chronic or lifelong barriers to access. These barriers might become a problem for some people with mental illness, a physical disability, neurological differences, or sensory impairment when it comes to learning events. However, these barriers often have more to do with how we approach teaching than they have to do with the individual's ability to learn. Many of us utilize eyeglasses to improve our ability to interact with our world. There are various other assistive technologies that people use to interact with their computers and the world. Our job as educators is to ensure that we create content that works for our learners and any technologies on which they depend.

Accessibility is not a one-size-fits-all designation. What is accessible for one person may not be accessible for another, and solutions designed to help some people might be problematic for others. In some instances, it is better to have different versions of a website or learning event to serve your audience best. Still, it is crucial (and may be legally required) to ensure that all versions offer the same information and value.

Who Sets the Standards?

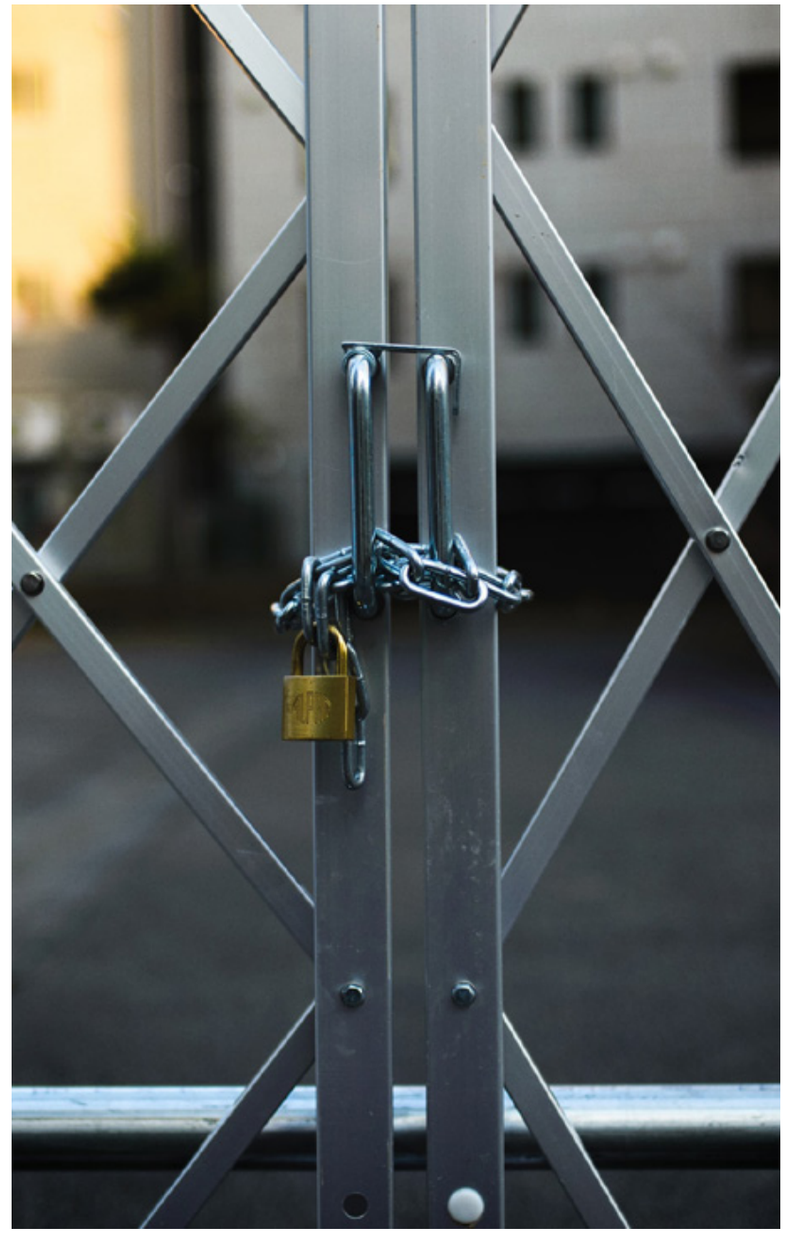
In the United States of America, "508 Compliance" is the buzzword most-often used to describe the accessibility of a digital product or service. In 1998, Congress amended the Rehabilitation Act of 1973 to set improved standards for the use of electronic and information technology. Section 508 specifically requires that employees and members of the public with disabilities can access information from federal agencies. Along with the Americans with Disabilities Act (ADA), the Rehabilitation Act is one of the cornerstones of accessibility law in the United States.

"Compliance" with Section 508 is somewhat misleading, however. Section 508 applies to federal agencies, their contractors, and vendors providing relevant services and products to federal agencies. Further, Section 508 standards do not include much guidance for what best practices and approaches to use in specific formats. Instead, Section 508 and the supporting website provide recommendations and reference other standards, such as Web Content Accessibility Guidelines (WCAG). Standards like WCAG, developed by the World Wide Web Consortium (W3C), and PDF/Universal Accessibility, developed by the International Organization for Standardization (ISO), provide more concrete guidance for accessibility requirements in various formats relevant to education.

While more explicit accessibility mandates often bound educational institutions and public organizations, most places of work are subject to the ADA. By meeting standards proactively, even where not required, you better support your audience and avoid the burden of creating adapted versions on an as-needed basis as they arise.

"The only disability is when people cannot see human potential."

—Deborah Ruh



Even the best course content is useless if your learners cannot access it.

WHAT ARE THE PRACTICAL IMPLICATIONS?

When we think of accessibility for learning events, we are primarily concerned with four groups: People with vision impairment, people with hearing impairment, people with motor impairment, and people with neurological differences. Practices like including captioning, transcription, self-paced progress, and the ability to navigate using a keyboard can reduce or remove barriers for many people. By no means is this an exhaustive list of accessibility considerations, but designing for these people in mind covers many of the most common accessibility needs.

Some users rely on assistive technology to help them interact with content. One of the most important forms of assistive technology are applications called screen readers. Screen readers are especially useful for those with significant vision impairment. Screen readers will turn on-screen text and structural cues into audio for the user. However, for screen readers to function correctly, the content must be appropriately organized and formatted. Some elements, like images, must be provided alternative text descriptions. Additionally, when a person uses a screen reader, they may rely on keyboard controls for navigation, as do many people who are unable to use a mouse comfortably. Much of this structure and formatting is invisible to users not using a screen reader or keyboard controls.

Because of these implications, consideration must be made at all stages of the design and development of a learning product or event to ensure that it is appropriately accessible. There are a many different aspects of accessibility, and not all of them need to be accounted for in every product. Still, you should be concerned about making your learning events accessible to your audience.

Universal Design as a Best Practice

The concept of Universal Design suggests that we should attempt to design environments and products in such a way that they are useful for most people without excluding those with disabilities. Most accessible design standards are intended to be noninvasive to most users while preventing critical gaps for others. The classic example of Universal Design is the humble curb cut. While regular curb cuts were primarily installed to improve access for people using wheelchairs, anyone pushing a cart or carriage can attest to their convenience. Likewise, considerations like captioning, transcription, clear visuals, and the ability to self-pace are necessary for some users, but beneficial for all users.

Universal Design for Learning (UDL) is a framework created by CAST, a non-profit education and development organization based in Wakefield, Massachusetts. CAST uses the universal design principles to establish broad guidelines to create experts out of all learners. These guidelines include providing multiple means of engagement, representation, and action or expression so that all users can interact and respond. In essence, the guidelines boil down to giving learners choices about how they interact with content and how they submit responses. The broader your audience, the more flexibility you should consider.

Universal Design Examples:

- A user with low vision may depend on a video transcript for text-based description of on-screen content, but it may also be handy for English-language learners or people who prefer to read.
- A blind user may rely on properly-formatted document for use with a screen reader, but many users are taking advantage of growing text-to-speech capabilities to listen to text during their commute or chores.
- A deaf learner may depend on captioning to follow along with a recorded lecture, but any learner on a noisy train or in a hushed library can take advantage of the feature.
- A learner with dyslexia may struggle with body text that is in all capital letters or with excessive underlining, but it also makes it easier to read for everyone.
- A learner with limited fine-motor skills may be unable to use a keyboard to type an essay response, by allowing submissions in multiple formats, such as a video response, all users can demonstrate what they have learned in the format they are most comfortable with.

COMMON DIGITAL ACCESSIBILITY MEASURES

Captioning & Transcription

Text-alternatives to audio content are a standard measure for users with diminished vision. Both captions and transcripts should be provided whenever possible. Closed captioning, which may be toggled on and off, is generally preferable to open captioning, which cannot be turned off.

Descriptive Audio

For users with low vision or blindness, additional audio describing important on-screen content may be necessary.

Assistive Technology Compatibility

Assistive technology, such as screen readers and braille displays, works best with properly formatted content. Logical order and minimal redundant elements allow for ease of use.

Alternative Controls

Some users may be unable to use touch-screen or mouse-based controls and interactions. Because of this, some forms of interactions are discouraged and keyboard or controller-based navigation should be supported.

User-Controlled Pace

Time limits and auto-advancement can interfere with the ability to learn, especially for people with some forms of learning or anxiety disorders. Allowing users to control the pace is generally preferable.

Alternative Text

Graphics and non-text information should be given alternative text descriptions. In transcripts, important visual content should be detailed.

Legible Text

Text must be legible and display appropriately when re-sized. Decorative or handwritten typefaces are more difficult to read. Sans serif font families are best for digital content.

Use of Color & Contrast

Information should be conveyed by color alone and elements must have significant contrast for colorblind and low vision users.

A man uses a braille display device with his computer.

Examples of poor and good typeface and contrast for text.

CONCLUSION

We hope that you have found this ODLS Quick Guide volume on accessibility helpful. Although designing your course with accessibility in mind takes a little additional time and compromise, it allows a broader audience to access the course and improves everyone's experience. As accessibility requirements become more pervasive and more specific across industries, being ahead of the requirements will also save you time and money in the future.

If this all sounds overwhelming or difficult still, don't forget that we are here to help you. From start to finish, ODLS staff can support your organization's design and development of learning materials and events with a wealth of project management, facilitation, design, and development experience.

Thank you.

Learn More:

Web Content Accessibility Guidelines

Universal Design for Learning

"Accessibility for E-Learning" from the Association for Talent Development

"Accessible eLearning Benefits All Users" from Learning Solutions magazine

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