Accessibility Regulations and Tips for Reaching Older Adults and People with Disabilities

Debby Newman and Pam Prokop

Abstract

Providing accessibility to all audiences is not just the right thing to do—it is the law. As a group, communicators have a responsibility to create accessible resources for people with disabilities, whether this involves classroom materials and press releases or online meetings. While communicators are not lawyers, we need to understand the essence of the statutes, since the United States Census Bureau (2006) reports that there are 51 million Americans with disabilities. This article describes the laws' requirements and ways for federally funded land-grant institutions to meet the intent of those laws. These institutions need to meet the requirements of the 1973 Rehabilitation Act (Section 504), the 1990 Americans with Disabilities Act (ADA), and Section 508, which amends the 1973 Rehabilitation Act to include software and Internet presentations. Applied communicators must make reasonable efforts to ensure that information products developed for people with disabilities are as effective as those developed for other audiences.

Like Extension services at other land-grant institutions, University of Minnesota Extension strives to provide wide access to its research-based information. For instance, INFO-U, which provides printable, Web-based fact sheets that answer questions about daily life, can furnish users with Braille copies of its brochures upon request at no charge. In addition, INFO-U has an automated telephone component. The prerecorded phone scripts and Braille brochures meet the needs of people with vision impairments, while the Web site serves those with hearing impairments. These are the two disabilities that the university's communicators are most likely to encounter. While many university materials are not readily available in alternative formats, it is possible to take steps at the front end of the production process to assist the 16% of the population who may need accommodation (Association for Higher Education and Disabilities, 2006; United States Census Bureau, 2006).

Universities also must inform people with disabilities that alternative formats are available (McBreen, 1994). Currently, all publicly funded

universities are legally required to include an accessibility statement in their publications. The statement usually reads something like this: "For Americans with Disabilities Act accommodations, please call 555-1212, write to 123 University Avenue, or visit www.university.edu." This statement indicates that the university will make a reasonable effort to provide information in an alternative format.

The following discussion shares information about disability laws and whom they affect. It then proposes some best practices for communicators. The discussion also addresses newer technologies, like podcasting, that can make materials more accessible for users but aren't always intuitive for developers. Because many university communications are now Web-based, it also introduces readers to the World Wide Web Consortium (W3C). Additionally, the authors recommend visiting the Web Accessibility in Mind (WebAIM) Web site (http://www.webaim.org/), an initiative of Utah State University and Utah's Center for Persons with Disabilities.

Disability laws, disability advocates, and members of the W3C and its subgroup, the Web Accessibility Initiative (WAI), all have similar goals. These goals include providing policies and standards that communicators and others can follow to serve those with disabilities. Information provided here is not intended to serve as legal advice. For legal recommendations, a reputable lawyer specializing in disability law should be consulted. The intent of this article is to help communicators better fulfill their mission by helping them to prepare usable resources for all of their audiences (Brewer, 2005).

Government Regulations That Pertain to Land-Grant Institutions

Because they receive federal financial assistance, land-grant institutions are among the entities required to meet the accessibility regulations of Section 504 of the Rehabilitation Act of 1973 (United States Department of Health and Human Services, Office of Civil Rights, 2006). Land-grant institutions also fall under the Americans with Disabilities Act (ADA) of 1990, which applies to employers; government entities, such as state universities; and private entities that serve the public (United States Department of Justice, Civil Rights Division, 2005, 2006a). Therefore, under Section VI of Title II, communicators in the Cooperative Extension Service "must ensure effective communications with individuals with disabilities" (United States Department of Justice, Civil Rights Division, 2006b).

In 1998, Section 508 amended the Rehabilitation Act, adding accessibility requirements to include technology.

Section 508 requires Federal departments and agencies that develop, procure, maintain, or use electronic and information technology to ensure that Federal employees and members of the public with disabilities have access to and use of information and data, comparable to that of the employees and members of the public without disabilities—unless it is an undue burden to do so. (United States Access Board, 2006, ¶1)

Finally, ADA also governs youth development 4-H activities. Several inclusive 4-H programs exist around the country. These programs follow the spirit of the law (Stumpf, Henderson, Luken, Bialeschki & Casey, 2002; Tormoehlen & Field, 1994).

People With Disabilities in Extension's Audience

Who are the people with disabilities to whom the disability laws refer? The U.S. Department of Justice Civil Rights Division provides a broad definition of disabilities:

An individual with a disability is defined by the ADA as a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered. (2005, ¶1)

Regardless of laws and regulations, the authors propose that university communicators should strive to make their communications accessible to the widest possible audience. The following section includes several examples of best practices.

Best Practices

Where does one start to create accessible communication resources? First, contact the disability and inclusion office at your institution. The University of Minnesota Disability Services Office provides training and assistance for making communications more accessible to all audiences. The staff provides personal consultations, referrals for sign language interpreters, and demonstrations of assistive devices. The office's Web site is comprehensive, with subpages or links for almost any communication issue that one may face in a university setting. The office has also sponsored training or consulted with other university units to advocate for accessibility in university training. Topics have included usability testing; Web conferencing; distance learning; public Web sites; Microsoft applications, including Word

and PowerPoint; and Macromedia applications, including Breeze Meeting and Adobe Acrobat files.

Also, the University of Minnesota Extension Information Learning and Technology Unit (ILT) offers presentations on teaching persons with disabilities (Newman, 2006). Based on these resources, a number of best practices can be suggested to format print materials, to accommodate people's assistive devices, to accommodate people with hearing impairments, and to make adaptations for distance learning and Web sites. Some of the major suggestions are listed below.

Best practices to accommodate people who are deaf or hard of hearing.

- Speak more slowly.
- Use microphones in rooms large enough to accommodate 50 or more people.
- Hire qualified sign language interpreters, note takers, or captioners who type the lecture onto laptops in real time.
- Provide written versions of lectures (in advance, if possible).
- For users with cell phones, try text messaging for assignments and consultations.
- Use closed captioning for cable television and satellite classes.
- When possible, locate ear plug and headphone receptacles; these may be available in auditoriums, churches, and theatres where outreach and Extension classes are sometimes held.
- Ask the office of disability services how to work with students who use text telephones (TTY/TTD) or contact the state department of human resources.

Best practices with print materials.

- Use serif font typefaces, such as Times New Roman, for print materials.
- Use 12-point font or larger, especially for students and audience members over 40.
- Use at least 14-point font for readers over 60.
- Use at least 18-point font for visually impaired readers (P. Kragnes, personal communication, August 2, 2007).
- Consistently use font styles such as bold, italic, or underlining to help readers navigate, but avoid overusing them.
- Apply font styles using the drop-down menus of software applications, rather than clicking B (bold), I (italic), or U (underline) on menu bars. For instance, in PowerPoint, select View/Master/Slide Master and

set fonts in the box that appears. This procedure allows people using screen readers to view the content with all formatting intact.

- Reserve all-caps text for single words and short phrases; it is hard to read.
- Use wider spacing between lines.
- Use headers and chunk information into usable units.
- Remember to maintain at least 30% white space on each page.
- Use color judiciously to help organize information for people with low vision.
  - Use color in sidebars or as hints or to cross-reference within a body of material.
  - Use high-contrast text, such as black type on white or light gray paper, or yellow type on black paper, and vice versa.
  - Avoid red and green text to accommodate the 8% of the population that is color blind (United States National Library of Medicine, Genetics Home Reference, 2006).
  - Choose contrasting colors, shapes, and crosshatchings for charts and graphs.
- Set copy machines to "better" or "best" quality, not draft or toner-saver, for better contrast.
- Compare the results of setting the copy machine at grayscale versus black and white.
- Photocopy book pages and journal articles as cleanly as possible.
  - Place pages straight across, not at a slant.
  - Place materials carefully on the copier bed to avoid cutting off text.
  - Press down on bindings so that margin shadows do not darken the edges of text and make it illegible.

Classroom Tips When Using Technology
- When setting up rooms for Webcasts, Web conferencing, and distance learning, send written directions so people can connect; also, be sure to have a troubleshooting contact person.
- Darken the area around presentation screens (use speaker task lighting) for videos, Web conferences, and PowerPoint presentations.
- Use a minimum of 32-point font size for PowerPoint presentations.
- Follow PowerPoint recommendations that each slide have no more than five lines of five words each.

- Set up the speaker equipment so people in all parts of the room can hear the presentation.
- Make sure the classroom is wheelchair accessible.
  - Remember that it takes 5 square feet for a wheelchair to turn around.
  - Doorways need to be 32 inches wide.

Applications and Web Designer Tips

Applied communicators can access a growing number of resources that provide information on best practices with PowerPoint presentations (Edmonds, 2004; Rozaitis, 2006). Laura Carlson, a Web designer, offers a frequently updated Web site for designers (2006). Another good reference is the W3C Web Accessibility Initiative (WAI), which works with organizations around the world to develop strategies, guidelines, and resources to make the Web accessible to people with disabilities (World Wide Web Consortium, 2006). Some of the major Web content accessibility guidelines with examples by the authors follow:

- Provide equivalent alternatives to auditory and visual content. Include alternate text tags that allow assistive devices like screen readers to decode and verbalize the text and graphics on a computer screen.
- Do not rely on color alone. Consistent, limited use of high-contrast color helps readers navigate, but consider using a Web-based test site to see how readable your color is for color-blind participants.
- Use markup and style sheets, and do so properly. In Microsoft Word, use the format/styles menu to set fonts instead of highlighting a word and selecting bold or italic.
- Clarify natural language usage. When inserting a word in Spanish or another language, a Web designer or webmaster can assist writers by providing cascading style sheets or assisting with appropriate HTML or XML markup so screen readers can note the change.
- Create tables that transform gracefully. Standard tables are difficult for screen readers. Consider asking a Web designer to assist with markup, or include text-based table summaries.
- Ensure that pages featuring new technologies are usable by those with older technologies. After uploading a file, test how it looks by viewing it with an older browser and printing it out. If it doesn't look as intended, get assistance from a Web designer.
- Ensure user control of time-sensitive content changes. Avoid such things as animation and blinking if it is likely the intended audience

doesn't have the means on their computers to pause or stop the actions.

- Ensure direct accessibility of embedded user interfaces. Offer a text equivalent if it is likely the audience doesn't have access to Flash videos and other plug-ins on their computers.

- Design for device independence. Provide keyboard navigation. When users need to navigate through a document with a mouse rather than a keyboard, someone without sight cannot navigate.

- Use interim solutions. Ask Web designers to avoid pop-up screens and to set forms so they are readable by assistive devices (Letourneau & Freed, 2000).

- Use W3C technologies and guidelines. There are currently 14 guidelines (Letourneau & Freed, 2000).

- Provide context and orientation information. Grouping related elements helps people with cognitive disabilities and visual impairments (Letourneau & Freed, 2000).

- Provide clear navigation mechanisms. Rather than including "click here," provide links to other sites that can be understood by assistive devices. Consider the audience and, if necessary, add "read more" before the link, which will usually appear in a blue font.

- Ensure that documents are clear and simple. This is a factor in universal design that benefits everyone.

Conclusions

Communicators have an opportunity to provide usable and accessible resources to land-grant audiences. While the myriad of laws addressing the issue of accessibility may be daunting, most institutions have disability departments and resources for personnel and users. In addition, the Office of Civil Rights within the U.S. Justice Department offers user-friendly Web sites that enable communicators and others to understand and follow the law.

About the Authors

Debra Newman is a learning technology project manager and information coordinator at the University of Minnesota. Pam Prokop is a former document conversion coordinator and is currently a graduate student at the University of Minnesota. Both are ACE members.

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Professional Development

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